



the Skyscraper

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November 2023

AMATEUR ASTRONOMICAL SOCIETY OF RHODE ISLAND * 47 PEEPTOAD ROAD * NORTH SCITUATE, RHODE ISLAND 02857 * WWW.THESKYSCRAPERS.ORG

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Low Frequency Gravitational Waves: A New View of the Universe by J. Andrew Casey-Clyde

Saturday, November 4
at Seagrave Memorial Observatory

In-person and on Zoom (Contact Linda Bergemann (lbergemann@aol.com) for the Zoom link.

6 PM: Socializing

7 PM: Business Meeting & Presentation

TOPIC: "Low Frequency Gravitational Waves: A New View of the Universe"

SPEAKER: J. Andrew Casey-Clyde, University of Connecticut Storrs, CT Graduate Assistant

Gravitational waves are ripples in the fabric of space-time, predicted by Einstein's theory of general relativity. First observed by LIGO in 2015, these waves can be generated by massive objects, such as black holes, orbiting each other in a binary system. Recently the North American Nanohertz Observatory for Gravitational Waves (NANO-Grav) reported the first strong evidence of low frequency gravitational waves from supermassive black hole binaries — our first glimpse of gravitational waves from binaries that are billions of times more massive than those seen by LIGO.

In this talk Andrew Casey-Clyde will teach us about the low frequency gravitational wave universe, which astronomers have now seen for the first time. First we will learn what a supermassive black hole

is and how they can form binary systems. Andrew will then discuss the types of gravitational wave signals these binaries generate and how experiments like NANOGrav detect these low frequency gravitational waves. He will then explain what this new window on the gravitational wave universe can teach us about supermassive black hole binaries and the galaxies that host them. Finally he will conclude by discussing future prospects for low-frequency gravitational wave astronomy and the types of measurements we expect to make in the next few years.

J. Andrew Casey-Clyde is a doctoral candidate at the University of Connecticut researching multimessenger astrophysics with nanohertz gravitational waves. His research is focused on what the gravitational wave background can tell us about supermassive black hole binaries, which are formed by merging galaxies. He is also interested in the possible relationship binaries have with quasars, which can be triggered by galaxy mergers.



**Seagrave Memorial Observatory
Open Nights**
Saturdays in November
@ 7pm

Skyscrapers Official Merchandise

<https://www.bonfire.com/store/skyscrapers/>



President's Message

by Linda Bergemann

Fall is upon us and winter is just around the corner.

November provides our last opportunity to hold our monthly meeting at Seagrave until the spring. For the months of December through March, our meetings will be held at the nearby North Scituate Community House.

Russ Chaplis, our 1st VP, has lined up programs/speakers to take us through the winter months. We will celebrate the holidays on December 16th (note date) with a potluck dinner followed by "Astronomy in 3-D" by Steve Nathan, of Eastern Connecticut State University. In January, we will be regaled by our fellow members on their experiences surrounding the October 14, 2023 annular eclipse. February we will host Dr. Martha Hanner, astronomer and planetary scientist, as our guest speaker on a yet to be announced topic. And, we will wrap up our time away with a historical presentation by our historian Dave Huestis on Frank Evans Seagrave (1860-1934) and Skyscrapers, Inc.

We will be well-prepared and ready to return to Seagrave Memorial Observatory in April, for our annual meeting.

The observatory will continue to be open to the public on Saturday nights as long as the weather cooperates and the grounds are accessible. Star parties for members will be announced when conditions are favorable. If

you would like to be added to the call-list for star parties, contact Steve Hubbard (cstahhs@gmail.com) or visit your profile on Night Sky Network and add your name to the "Star Parties" message group.

My gratitude goes out to those who put together these activities month after month for us all to enjoy. Please take advantage of at least some of these events. Attend a meeting, if just to mingle with other members. Attend a star party. Or, just step out gaze at the night sky.

Clear skies!



Cosmic Coffeehouse

Informal astronomy chat room meets on the 15th of each month at 7:00pm

- interactive ZOOM format
- current news
- featured speakers
- equipment reviews
- observing notes
- fun 'n games

To receive your invite, send request to Astro-Geek@comcast.net



Skyscrapers Presentations on YouTube

Many of our recent monthly presentations on Zoom have been recorded and published, with permission, on the Skyscrapers YouTube channel. Go to the URL below to view recent presentations.

<https://www.youtube.com/c/SeagraveObservatorySkyscrapersInc>



The *Skyscraper* is published monthly by Skyscrapers, Inc. Meetings are held monthly, usually on the first or second Friday or Saturday of the month. Seagrave Memorial Observatory is open every Saturday night, weather permitting.

Directions

Directions to Seagrave Memorial Observatory are located on the back page of this newsletter.

Submissions

Submissions to The Skyscraper are always welcome. Please submit items for the newsletter no later than **November 15** to Jim Hendrickson at hendrickson.jim@gmail.com.

E-mail subscriptions

To receive The Skyscraper by e-mail, send e-mail with your name and address to jim@distantgalaxy.com. Note that you will no longer receive the newsletter by postal mail.

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Jeff Padell

Invitation to all Skyscrapers!

by Steve Siok

I am writing to members of Skyscrapers who are not currently participating in any of our organized observing activities.

The Observatory Committee is a group of members dedicated to opening Seagrave Memorial Observatory to our members and the public every clear Saturday night. Please consider visiting on a Saturday night just to get to know other members, or to volunteer as a member of the Observatory Committee, guiding the public through the night's sky.

Members of the Observatory Committee commit to a few hours on one clear Saturday night a month; schedules are developed bi-monthly. You don't have to own a telescope, or even know how to use one, to be of help. We need a minimum of four people to open: a greeter, a video operator, and two telescope operators.

Here is a description of the current list of jobs at an open night:

Greeter (Location: near the entrance to the inner wall)

- welcomes visitors
- explains layout of the observatories and meeting hall
- gives directions to get to the Clark and 12"
- encourages visitors to view short

videos about this month's night sky in the Meeting Hall

- encourages visitors to sign up for event notifications by giving their e-mail address

Constellation Sky Guide (Location in courtyard)

Prerequisite: Needs knowledge of local constellations

- Using a green pointer (provided), shows the currently visible constellations
- describes the name, translation (as in Orion is the Hunter) and any bright objects in the constellation.

The Astronomical League's easy to use "Navigating the Night Sky" for the month should be used. Here is a link for the October issue: <https://www.astroleague.org/wp-content/uploads/2023/09/2023-October-15-.pdf>

Video Operator in the meeting hall (basic computer skills needed – short training required)

- runs the computer/projector to show prepared videos provided for you
- answers audience questions

Operators for our Portable Telescopes and Binoculars

We have portable telescopes that may be operated by members of less than one year, or they can bring their own. We also have mounted binoculars that can be used to show objects.

Telescope operator for the 12" in the back observatory

Alvan Clark Operator

These positions require that one be a member for at least a year and be familiar with celestial objects, constellations and finding objects in the sky. (The Alvan Clark requires that the operator find objects manually.)

Training is required for 12" and Clark. It consists of learning how to use each telescope and how to open and close each observatory. The person should be familiar with the celestial events mentioned in the monthly NASA video and on monthly sky maps.

If you are interested in joining us please contact me for further information.

You will be helping the Society and you will also enjoy meeting and talking to our visitors.

Thank you for your interest and help!

Steve Siok, Observatory Committee Coordinator

It's Time to Change the Time, Again

by Francine Jackson

Once again, soon after you read this, you will be given a "present" of an extra hour's sleep, as Daylight Saving Time ends the morning of November 5th, when we recoup the hour we lost several months ago.

Daylight Saving Time initially was proposed by Benjamin Franklin in 1784, when, during a trip to Paris, he noted that, by Parisians slightly changing their sleep habits, they could save a lot of money on lamp oil and candles. No one picked up on it, though.

However, the concept of saving money did lead this change in time to occur during World War I, although it wasn't an immediate change across the country. That didn't even happen in 1966, with the Uniform Time Act of 1966; then, in 1974, then-President Nixon tried to sign a law stating DST would be year-round, thereby saving fuel

during the gas crisis. It was soon observed, however, that many more accidents were happening to children who were going to school in the morning in the dark. Finally, upon Nixon's resignation, President Ford ended the practice.

For many, DST is a good thing; however, others feel it is just a waste of time, an

idea whose time has come to stop. One of the best quotes concerning this is from the concept of cutting off the top of a blanket, sewing that to the bottom, and convincing yourself you have a longer blanket. Whatever your feelings, though, please remember: Sunday, November 5th, "fall back," and have a good night's sleep.



Skylights: November 2023

by Jim Hendrickson

After having spent the past 23 days in Libra, the **Sun** enters Scorpius on November 23, where it will spend less than a week, entering the non-zodiacal constellation Ophiuchus early on the 30th.

After the latest sunrise at 7:22am Eastern Daylight Time (UTC-4) on the 4th, the change to Eastern Standard Time (UTC-5) occurs on the 5th.

November begins with the **Moon** going through its waning gibbous phase. Last quarter Moon occurs in Cancer on the 5th. It will be located just about 1 binocular field of view from M44, the Beehive cluster.

The slim, 27.7-day, 3.8% illuminated crescent Moon is 2.3° east of Spica, in Virgo, on the 11th.

New Moon occurs on the 13th, marking the beginning of Lunation 1248. First quarter Moon occurs on the 20th, in Aquarius.

The nearly Full Moon passes 1.0° south of the Pleiades cluster, M45, in Taurus on the 26th.

The Full Beaver Moon occurs at 4:15pm EST on the 27th. This is one of the most northerly Full Moons of the year, culminating at 71.5° above the horizon just before midnight on the 26th-27th. Also note that the Moon is just 1° from the Pleiades cluster at that time.

November sees an evening apparition of **Mercury**, though a rather unfavorable one, as its elongation angle relative to the horizon remains relatively shallow. Mercury is best viewed during the final week of the month, when it sets an hour after the Sun. The 1.6-day, 2.6% illuminated crescent Moon is just 4° to the left of Mercury on the 14th.

Venus shines brilliantly in the morning sky throughout November, as it is visible for nearly four hours before sunrise all month.

One of the year's closest Moon-planet conjunctions occurs on the 9th, when the 25.6-day Moon is just 0.4° north of Venus. The closest pairing occurs at about 3:30am EST. An occultation occurs, but will not be visible from Rhode Island.

On the 30th, Venus is 4.2° north-northeast of Spica, in Virgo.

Mars is in conjunction on the 18th, and will remain invisible until later in December. Noteworthy for this conjunction is that Mars will appear to pass behind the Sun's disk from our perspective, and the occultation takes a little under 39 hours. Occulta-

tions of Mars by the Sun are relatively uncommon, but not necessarily rare. The last time one occurred was in May 1998, and the next one will occur in October-November 2038.

Jupiter reaches opposition in Aries on the 3rd. At just 3.98 AU away, Jupiter shows a huge 50 arcsecond globe in telescopes in early November.

In a good demonstration of the opposition angle, the shadows of Jupiter's Galilean moons transit at nearly the same time as the moon itself. There are a few such events to watch for: On the 3rd, Io begins transiting at 5:27am, then during that evening, Europa and its shadow transit at 9:15pm. On the 4th, Io transits beginning at 11:53pm.



Jupiter on October 24, taken by Bob Horton with Quantum 6-inch MCT.

Saturn ends its retrograde loop and begins moving prograde (eastward) on the 4th. In early November, the ringed planet remains in our evening sky until just after lam (midnight beginning on the 6th).

The waxing gibbous Moon is 4.5° south-southeast of Saturn on the 20th.

Saturn reaches eastern quadrature (90° elongation) on the 23rd.

After Jupiter, **Uranus** also reaches opposition in November, on the 13th. Located in Aries about 12° east of Jupiter, Uranus shines at magnitude 5.7 and can be easily located with binoculars.

A line connecting Jupiter and the Pleiades cluster in Taurus is bisected by a 4.3 magnitude star, Botein (delta Arietis). Uranus is located 2.1° south of this star.

Its 3.8 arcsecond globe, larger than that of Mars currently, can be detected in most telescopes under steady seeing conditions, giving distinction to Uranus compared to stellar points.

Events in November

- 3 Jupiter Opposition
- 6 Moon 5.0° W of Pollux
- 4 Saturn Stationary
- 4 Latest Sunrise (7:22 Daylight Time)
- 5 Last Quarter Moon
- 5 18 Melpomene Opposition (8.2)
- 9 Moon 0.4° NE of Venus
- 11 Moon 2.3° E of Spica
- 13 New Moon (1248)
- 13 Uranus Opposition
- 14 Moon 4.0° SE of Mercury
- 18 Mars Conjunction
- 20 First Quarter Moon
- 20 Moon 4.5° SSE of Saturn
- 22 Moon 3.0° SW of Neptune
- 23 Saturn Quadrature E90
- 25 Moon 2.1° NW of Jupiter
- 26 Moon 2.0° N of Uranus
- 26 Moon 1.0° S of M45
- 27 Full Beaver Moon
- 30 Venus 4.2° NNE of Spica
- 30 Moon 1.7° S of Pollux

Ephemeris times are in EDT (UTC-4) through November 4, EST (UTC-5) from November 5 for Seagrave Observatory (41.845N, 71.590W)

The waning gibbous Moon is 2.0° north of Uranus on the 26th, and occults our locator star Botein at 5:15am.

With Uranus at its closest, at 18.63 AU, you may also want to try to spot its larger outer moons. Titania and Oberon, shine at magnitudes 13.8 and 14.0, respectively, placing them within reach of a 12-inch telescope on a dark night. Since we're currently looking at the orbital plane of Uranus nearly pole-on, the moons will always be at least 25 arcseconds from the planet. As we're looking at the south pole of Uranus, the moons appear to orbit clockwise around the planet.

Neptune is well-placed for viewing on November evenings. Our most distant planet can be located with binoculars or a telescope about 5° south of delta Piscium, the southeasternmost star in the Cirlet asterism of Pisces. Still moving through its retrograde loop in Pisces, Neptune dips back into Aquarius for two weeks, beginning on the 27th.

The waxing gibbous Moon is 3.0° southwest of Neptune just past midnight on the 22nd.

Ceres is in conjunction on the 21st and will not be easily visible for the remainder of 2023.

The first half of November is the last good time to find **Pluto**, as the magnitude 14.5 dwarf planet is moving lower in the southwest in the early evening, and bright Moonlight will interfere with locating it later in the month.

At the beginning of November, Asteroid **4 Vesta** is located between the two feet of Gemini, Tejat (mu Geminorum) and Alhena (gamma Geminorum). It then begins its retrograde loop and moves eastward, entering Orion on the 28th, and brightens from magnitude 7.4 to 6.9 over the course of the month.

Another seldom-mentioned asteroid, **18 Melpomene**, reaches opposition in Cetus on the 5th. It shines at magnitude 8.2 and lies about 8° south of Menkar (alpha Ceti) and 13° east of the long-period variable star Mira (omicron Ceti). The ~150 km rock is just 0.86 AU away.

While we're now well into autumn, the summer stars are still with us in the early evening, mainly owing to the earlier sunsets giving us extra hours of dark observing time earlier in the day. Arcturus, which has been in our evening sky since spring, is disappearing below the west-northwestern horizon during November's early days. To the right, the Big Dipper is in its right-side-up stance, appearing to hold its delicious cosmic soup just above the northwestern horizon. Just opposite of Polaris, high in the north-northeast, Cassiopeia and Cepheus are in position to welcome your exploration of their deep-sky treasures.

A little later in the evening, around 7pm EST mid-month, we find the pointer stars of the Big Dipper oriented directly below Polaris, showing us the point of true north. Draw a line from the pointers, through Polaris, and continue on past the zenith. Notice that this line also connects the western edge of the Great Square of Pegasus, through the stars Scheat (beta Pegasi) and Markab (alpha Persei). Now continue this line farther towards the south, and find that it also intercepts Fomalhaut (alpha Piscis Austrini).

At about 8pm EST, we're greeted by Orion, its belt stars forming a nearly vertical line rising out of the eastern horizon. The Andromeda Galaxy, the farthest object visible to the unaided eye, at 2.5 million light years, is now high overhead.

In the west, we begin to notice that Cygnus, the Swan, is now making its annual migration west, taking with it the rest of the summer constellations surrounding the

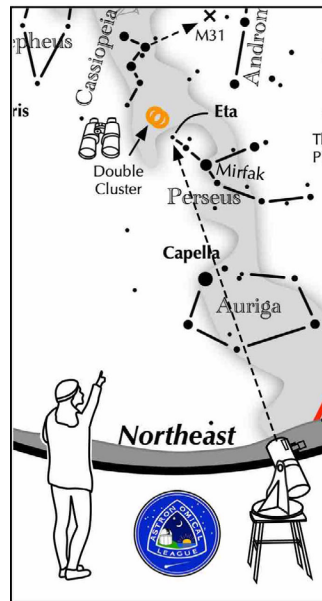
Milky Way's Great Rift.

November is usually a good month for meteor watchers. The Taurids, a low-rate shower that originates from debris left by comet 2P/Encke, has both a southern and northern component, and lasts for several weeks, from October and through November. The southern component peaks on November 5-6, and the northern component peaks on the 11th-12th. As this peak activity coincides with the waning crescent and new Moon, prospects are generally favorable this year, but you're likely to see some

meteors well removed from the peak dates.

November's better-known meteor shower, the Leonids, peaks over the 17th-18th. Comet 55P/Tempel-Tuttle replenishes the meteor stream every 33 years, and when Earth crosses into one of these streams, the Leonids undergo "storm" activity, the last of which was seen in 2001. We're not expecting storm-level activity this year, but when the shower reaches its peak on the 17th-18th, the waxing crescent Moon shouldn't provide too much interference.

ASTRONOMICAL LEAGUE Double Star Activity



Other Suns: Eta Persei

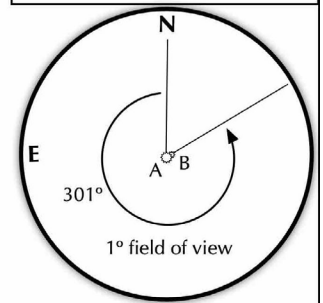
How to find Eta Persei on a November evening

Face northeast. Between bright Capella and the "W" of Cassiopeia, is the constellation Perseus. Eta Persei is not quite mid way between Mirfak, the brightest star in Perseus, and the eastern edge of the "W." It lies close to the Double Cluster.

Suggested magnification: 40x
Suggested aperture: >3 inches

Eta Persei

A-B separation: 28 sec
A magnitude: 3.8
B magnitude: 8.5
Position Angle: 301°
A & B colors:
yellow, blue



A little later in the evening, around 7pm EST mid-month, we find the pointer stars of the Big Dipper oriented directly below Polaris, showing us the point of true north. Draw a line from the pointers, through Polaris, and continue on past the zenith. Notice that this line also connects the western edge of the Great Square of Pegasus, through the stars Scheat (beta Pegasi) and Markab (alpha Persei). Now continue this line farther towards the south, and find that it also intercepts Fomalhaut (alpha Piscis Austrini).

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If you can observe only one celestial event this month, consider this one:

View through 10x50 binoculars

Requires a dark sky

Have you seen M31, the Andromeda Galaxy?

Look high in the south 90 minutes after sunset in November.

- Find the Great Square nearly at the zenith.
- Identify the line of four stars beginning at the northeast corner of the Great Square and extending northeast.
- Identify a second but dimmer line extending more northeasterly than the first line. These two lines represent Andromeda.
- Identify the third star on each line.
- A line passing through those two stars and extending northwest for the same length lands on M31.

OR ...

- Draw an arrow pointing southward through the three westernmost stars of Cassiopeia's "W."
- Extend that line for the same length as Cassiopeia is wide.
- It ends on M31.

South 90 minutes after sunset

Observer's Challenge:

NGC 7027: Planetary Nebula in Cygnus

by Glenn Chaple

Magnitude 8.5, Size 16" X 12"

NGC 7027, a planetary nebula in Cygnus, is a true hidden treasure. Don't take my word for it. Just ask Stephen O'Meara, who devoted 5 pages to it in his Deep-sky Companion book Hidden Treasures. He writes, "NGC 7027 is one of the brightest, smallest, most unusual, and arguably the most fascinating planetary nebula in the night sky. It is, hands down, the most extensively studied – both observationally and theoretically."

NGC 7027 (aka the "Jewel Bug Nebula") merits "hidden" status because its relatively small size (just 16 by 12 arc-seconds) and location in a rich Milky Way field allowed it to avoid discovery until late in the 19th century. It eluded the watchful eye of William Herschel when he conducted his celestial surveys of the late 18th and early 19th centuries and remained "hidden" until spotted by the French astronomer Edouard Stephan with a 31-inch reflector in 1878. Now that we know of its existence and location, we can capture NGC 7027 with a 6-inch scope.

The 2000.0 coordinates for the Jewel Bug are: RA 21h07m1.7s, Dec +42o14'11.0". To get there, star-hoppers will have to navigate 2-degree-long star-strewn paths either SSE from the 4th magnitude star xi (ξ) Cygni or ENE of 4th magnitude nu (ν) Cygni.

I used the latter route in tracking down NGC 7027 with a 10-inch f/5 reflector. At 40X, it looked like a slightly out-of-focus 8th magnitude star. To confirm that I was looking at a planetary nebula, I boosted the magnification to 208X. What I saw was a beautiful light blue, slightly oval patch of light – a definite treasure! It was bright and easy even without the aid of an OIII filter.

The reason NGC 7027 has drawn so much scrutiny from professional astronomers is that it's a planetary nebula in an early stage of development. The Jewel Bug may be as little as 600 years old. At such a young age, it's small as planetary nebulae go – perhaps just 0.1 or 0.2 light years in diameter. Studies indicate a distance of some 3000 light years.

The purpose of the Observer's Challenge is to encourage the pursuit of visual observing. It is open to anyone who is interested. If you'd like to contribute notes, drawings, or photographs, we'd be happy to include them in our monthly summary. Submit your ob-

serving notes, sketches, and/or images to Roger Ivester (rogerivester@me.com). To find out more about the Observer's Chal-

lenge, log on to rogerivester.com/category/observers-challenge-reports-complete.



"I took this object 3 times, a difficult object as it is easily overexposed. Third try I took 15 sec subs to be sure well below saturation in an attempt to get some inner detail. As I saw hints of detail previously. The central star is so bright compared to the surrounding planetary hard to process. So.. Here it is. See attached. There is some inner rectangular shape but can not clearly separate that from the central bright star. Taken with my 32 inch telescope, NB filters Ha, O3, and S2 about 30 min total imaging time. Taken with my ZWO ASI 6200 camera." Mario Motta, MD. (ATMoB)



Spy the Seventh Planet, Uranus

by Liz Kruesi

You might be familiar with Saturn as the solar system's ringed planet, with its enormous amount of dust and ice bits circling the giant planet. But Uranus, the next planet out from the Sun, hosts an impressive ring system as well. The seventh planet was the first discovered telescopically instead of with unaided eyes, and it was astronomer extraordinaire William Herschel who discovered Uranus March 13, 1781. Nearly two centuries passed before an infrared telescope aboard a military cargo aircraft revealed the planet had rings in 1977.

Since that discovery, multiple observatories have revealed more details of Uranus and its ring system. Most recently, the NASA-led JWST space observatory captured the planet and its rings in detail.

This recent image combines just 12 minutes of exposure in two filters to reveal 11 of the planet's 13 rings. Even some of the planet's atmospheric features are visible in this image. Even with advanced imaging like that from JWST, much of Uranus remains a mystery, including why it orbits the Sun on its side. This is because only one spacecraft has ever visited this planet: NASA's Voyager 2, which flew by the distant planet in the mid-1980s.

Planetary scientists are hoping to change that soon, though. Scientists recommended in a report released last year from the National Academies of Sciences, Engineering, and Medicine that Uranus be the focus on the next big planetary science spacecraft mission. Such a large-scale mission would gain insight into this icy

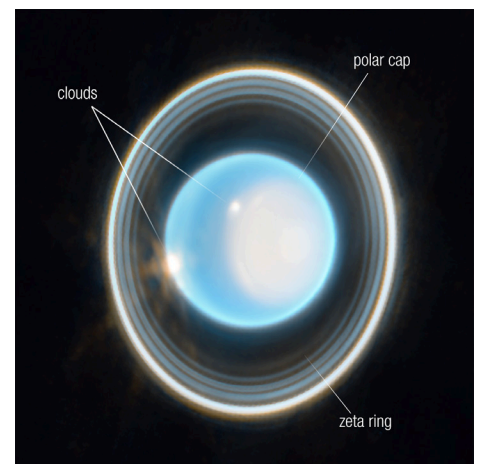
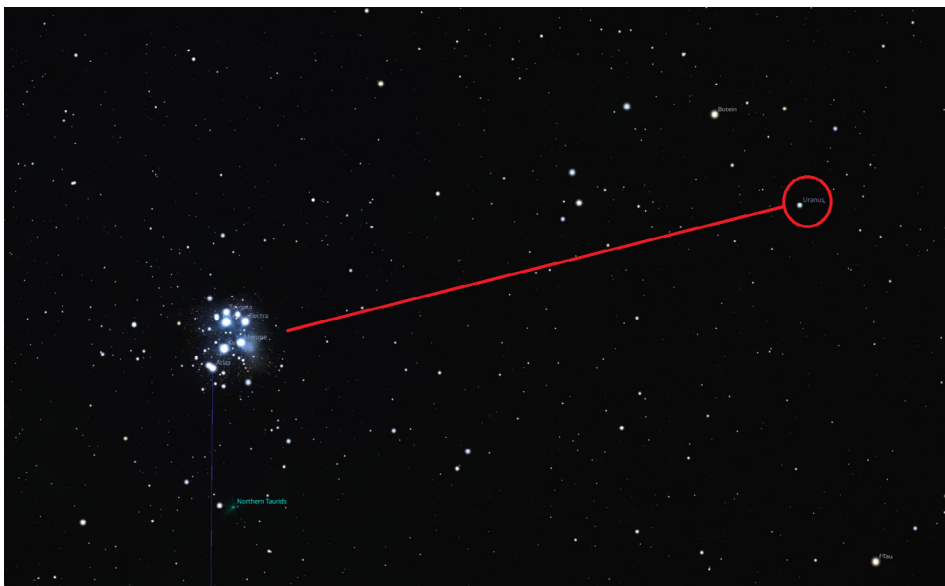
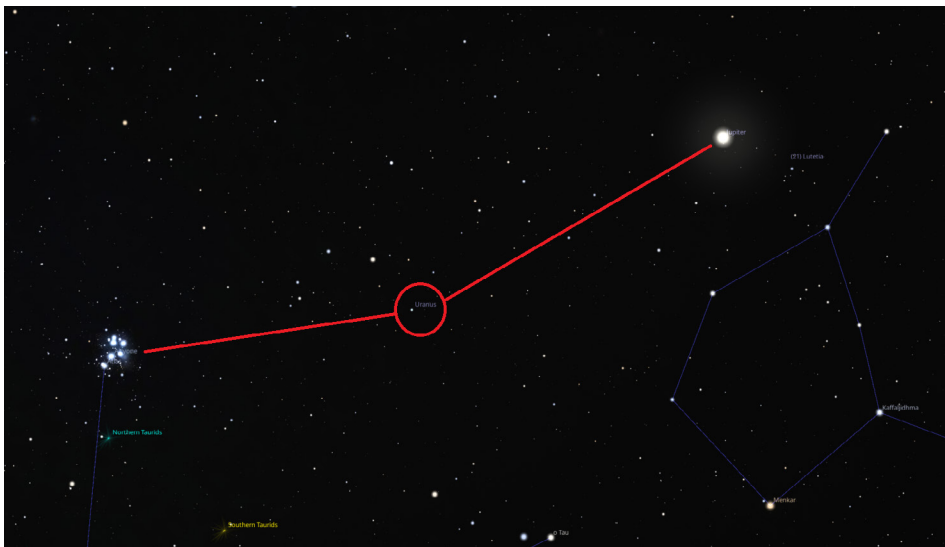
giant planet and the similar solar system planet, Neptune.

If you want to catch a view of Uranus with your own eyes, now is prime time to view it. This ice giant planet lies perfectly positioned in mid-November, at so-called "opposition," when its position in its orbit places it on the other side of the Sun from Earth. That location means our star's light reflects off Uranus' icy atmosphere, and the planet appears as its brightest.

To find it, look overhead just after midnight on November 13. Uranus will lie about halfway between the brilliant planet Jupiter and the diffuse glow of the Pleiades star cluster (M45). While Uranus may look like a bright blinking star in the night sky, its blue-green hue gives away its identity. Binoculars or a telescope will improve the view.

For more about this oddball planet, visit NASA's Uranus page.

This article is distributed by NASA's Night Sky Network (NSN). The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

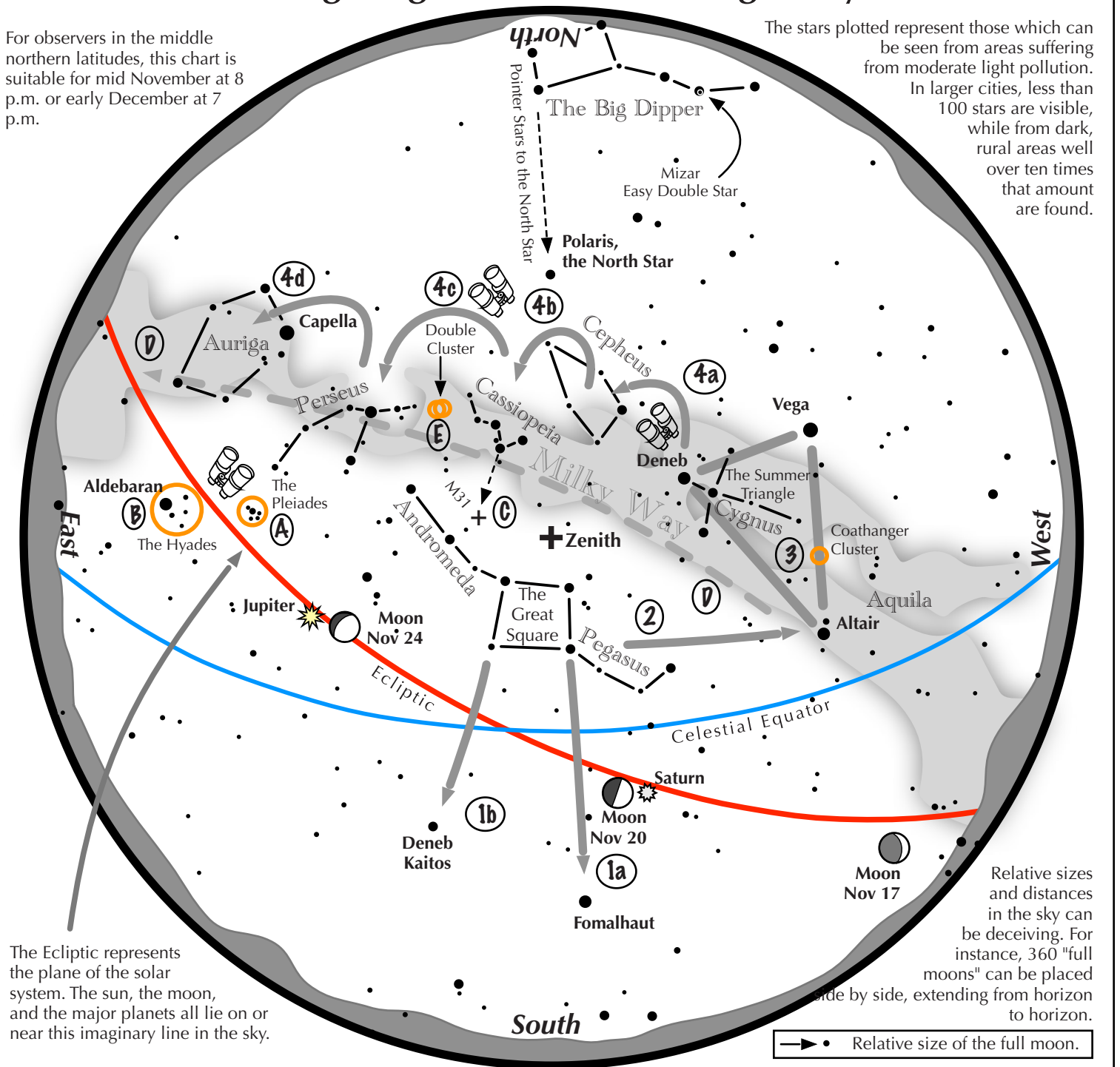


Uranus hosts 13 faint rings, 11 of which are visible in this JWST image. The planet was 19.67 times the Earth-Sun distance from our planet (1.83 billion miles) when JWST captured exposures through two near-Infrared filters on February 6, 2023. The white region in the right side of Uranus is one of the planet's polar caps. This icy world orbits the Sun differently from the rest of the solar system's planets – Uranus rolls along on its side. [NASA, ESA, CSA, STScI; Image Processing: Joseph DePasquale (STScI)]

Navigating the November Night Sky

For observers in the middle northern latitudes, this chart is suitable for mid November at 8 p.m. or early December at 7 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

—●— Relative size of the full moon.

Navigating the November night sky: Simply start with what you know or with what you can easily find.

- 1 Face south. Almost overhead lies the "Great Square" with four stars about the same brightness as those of the Big Dipper. Extend a line southward following the Square's two westernmost stars. The line strikes Fomalhaut, the brightest star in the south. A line extending southward from the two easternmost stars, passes Deneb Kaitos, the second brightest star in the south.
- 2 Draw a line westward following the southern edge of the Square until it strikes Altair, part of the "Summer Triangle."
- 3 Locate Vega and Deneb, the other two stars of the Summer Triangle. Vega is its brightest member, while Deneb sits in the middle of the Milky Way.
- 4 Jump along the Milky Way from Deneb to Cepheus, which resembles the outline of a house. Continue jumping to the "W" of Cassiopeia, then to Perseus, and finally to Auriga with its bright star Capella.

Binocular Highlights

A and B: Examine the stars of the Pleiades and Hyades, two naked eye star clusters. **C:** The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval. **D:** Sweep along the Milky Way from Altair, past Deneb, through Cepheus, Cassiopeia and Perseus, then to Auriga for many intriguing star clusters and nebulous areas. **E:** The Double Cluster.



Astronomical League www.astroleague.org/outreach; duplication is allowed and encouraged for all free distribution.

The Sun, Moon & Planets in October

This table contains the ephemeris of the objects in the Solar System for each Saturday night in November 2023. Times in Eastern Daylight Time (UTC-4) through November 4, and Eastern Standard Time (UTC-5) from November 5. Ephemeris times are for Seagrave Observatory (41.845N, 71.590W).

Object	Date	RA	Dec	Const	Mag	Size	Elong	Phase(%)	Dist(S)	Dist(E)	Rise	Transit	Set
Sun	4	14 35.5	-15 13.3	Lib	-26.8	1934.8	-	-	-	0.992	07:21	12:29	17:37
	11	15 03.4	-17 17.1	Lib	-26.8	1938.1	-	-	-	0.99	06:30	11:30	16:29
	18	15 32.1	-19 06.4	Lib	-26.8	1941.2	-	-	-	0.989	06:38	11:31	16:23
	25	16 01.5	-20 39.0	Sco	-26.8	1944.0	-	-	-	0.987	06:47	11:33	16:19
Moon	4	7 59.1	25 15.7	Gem	-12.1	1790.1	105° W	63	-	-	22:14	06:12	14:01
	11	13 13.8	-8 04.3	Vir	-9.5	1794.7	28° W	6	-	-	04:34	10:08	15:32
	18	19 42.1	-27 20.8	Sgr	-11.1	1926.8	58° E	24	-	-	12:00	16:34	21:15
	25	2 00.4	12 18.9	Ari	-12.6	1948.1	150° E	93	-	-	15:05	22:26	06:01
Mercury	4	15 10.9	-18 39.8	Lib	-0.5	4.8	9° E	97	0.466	1.418	08:14	13:06	17:58
	11	15 54.5	-21 53.8	Sco	-0.4	4.9	13° E	94	0.464	1.374	07:44	12:23	17:00
	18	16 38.6	-24 15.1	Oph	-0.3	5.2	16° E	89	0.449	1.303	08:11	12:39	17:07
	25	17 22.1	-25 35.6	Oph	-0.3	5.6	19° E	82	0.422	1.202	08:33	12:55	17:17
Venus	4	11 43.9	2 39.0	Vir	-4.2	21.8	46° W	56	0.720	0.777	03:26	09:38	15:49
	11	12 12.6	0 05.0	Vir	-4.1	20.4	45° W	59	0.719	0.830	02:36	08:39	14:41
	18	12 41.8	-2 38.6	Vir	-4.1	19.2	45° W	62	0.719	0.881	02:48	08:41	14:33
	25	13 11.7	-5 27.3	Vir	-4.1	18.2	44° W	65	0.718	0.932	03:00	08:43	14:25
Mars	4	14 52.7	-16 29.8	Lib	1.5	3.7	4° E	100	1.555	2.543	07:45	12:46	17:47
	11	15 12.3	-17 55.3	Lib	1.5	3.7	2° E	100	1.547	2.536	06:43	11:38	16:33
	18	15 32.3	-19 14.0	Lib	1.5	3.7	0° W	100	1.538	2.526	06:40	11:30	16:20
	25	15 52.8	-20 24.9	Lib	1.5	3.7	2° W	100	1.529	2.515	06:38	11:23	16:08
1 Ceres	4	15 17.2	-14 33.9	Lib	8.7	0.3	10° E	100	2.718	3.689	08:01	13:09	18:18
	11	15 29.0	-15 30.6	Lib	8.6	0.3	6° E	100	2.724	3.706	06:49	11:54	16:58
	18	15 40.9	-16 24.1	Lib	8.6	0.3	3° E	100	2.729	3.715	06:37	11:38	16:39
	25	15 52.9	-17 14.3	Lib	8.6	0.3	4° W	100	2.735	3.719	06:24	11:23	16:20
Jupiter	4	2 33.8	13 35.9	Ari	-2.8	49.4	178° E	100	4.975	3.983	17:31	00:22	06:14
	11	2 30.1	13 18.9	Ari	-2.8	49.2	171° E	100	4.976	3.995	16:00	22:51	05:42
	18	2 26.5	13 02.8	Ari	-2.7	48.9	163° E	100	4.977	4.023	15:30	22:20	05:10
	25	2 23.3	12 48.2	Ari	-2.7	48.4	155° E	100	4.978	4.064	15:01	21:50	04:38
Saturn	4	22 12.8	-12 54.8	Aqr	0.7	17.6	109° E	100	9.754	9.383	14:48	20:03	01:18
	11	22 13.0	-12 53.2	Aqr	0.8	17.4	102° E	100	9.752	9.494	13:20	18:35	23:50
	18	22 13.4	-12 49.8	Aqr	0.8	17.2	95° E	100	9.750	9.609	12:53	18:08	23:24
	25	22 14.2	-12 44.6	Aqr	0.8	17.0	88° E	100	9.748	9.725	12:26	17:42	22:57
Uranus	4	3 16.5	17 49.1	Ari	5.6	3.8	170° W	100	19.623	18.645	17:56	01:05	07:14
	11	3 15.3	17 44.6	Ari	5.6	3.8	177° W	100	19.622	18.632	16:28	23:37	06:45
	18	3 14.2	17 40.1	Ari	5.6	3.8	175° E	100	19.620	18.635	16:00	23:08	06:16
	25	3 13.0	17 35.7	Ari	5.6	3.8	168° E	100	19.619	18.652	15:31	22:39	05:47
Neptune	4	23 44.3	-3 04.9	Psc	7.8	2.3	134° E	100	29.905	29.209	15:43	21:34	02:25
	11	23 43.9	-3 07.3	Psc	7.8	2.3	127° E	100	29.905	29.302	14:15	20:06	01:57
	18	23 43.6	-3 09.1	Psc	7.8	2.3	120° E	100	29.905	29.404	13:48	19:38	01:29
	25	23 43.4	-3 10.3	Psc	7.9	2.3	112° E	100	29.905	29.513	13:20	19:11	01:01
Pluto	4	20 02.9	-23 14.4	Sgr	14.5	0.2	77° E	100	34.884	35.099	13:21	17:53	22:26
	11	20 03.3	-23 13.3	Sgr	14.5	0.2	70° E	100	34.889	35.218	11:54	16:26	20:59
	18	20 03.8	-23 12.0	Sgr	14.5	0.2	63° E	100	34.894	35.333	11:27	15:59	20:32
	25	20 04.3	-23 10.4	Sgr	14.5	0.2	56° E	100	34.899	35.441	11:00	15:32	20:05

AstroAssembly Astrophoto Contest

LANDSCAPES



1st Place • RONALD ZINCONI

Summer Milky Way Mt. Desert Island, ME

July 19, 2023 - Canon 6D Rokinon
SP 14mm f/2.5 ISO 3200, 25sec.



LLOYD MERRILL

“Summer Sky with Visitor”

August 13, 2023 - Canon EOS 7D
EFS 10-22mm f/3.5-4.5 USM, 30
sec. 10mm f/3.5 ISO 3200, Post-
processing: Adobe Lightroom



STEPHEN LAFLAMME

“Moonset Tranquility”

July 24, 2021 - White Island
Pond Plymouth, MA, Canon T6i
300mm f/5.6 ISO 800 1/13 sec.
exp. Captured with backyard EOS
software & Photoshop

LAURA LANDEN

Orion over Rhyolite, Utah

January 28, 2022 - Olympus OM-D E-M1 Mark III, 30sec. 12mm
f/5.6 ISO 1600



LAURA LANDEN

Milky Way

April 11, 2022 - Olympus OM-D E-M1 Mark III, 11 images -
stitched, 17mm f/1.8 10sec.
exposures @ f/2.2 ISO 6400



DEEP SKY



1st Place - STEPHEN LAFLAMME

The Horsehead Nebula

Takahashi TOA 130mm f/7.7, SBIG STT-8300 monochrome CCD camera, 20 X 3min. exposures with R,G,B, H-alpha filters, Processed with DeepSkyStacker and Photoshop

DAN FOUNTAIN & RICHARD DOHERTY

Messier 51

Celestron Nexstar 8" Canon T7i, 80 frames- 90sec. Total Integration 2 hours.



STEPHEN LAFLAMME

The Pleiades Cluster

Takahashi TOA 130mm f/7.7, SBIG STT-8300 monochrome CCD camera, 10 X 3min. exposures with R & G filters &, 20 X 3min with B filter, Processed with DeepSkyStacker and Photoshop



MAARTEN BROESS

CTB 1 – Abell 85

9/19, 9/20, 9/21/2023 - Sky-Watcher Starlux MN 190 f/5.3 AP 190mm, 1000mm FL, IOptron GEM45 OAG Guider, 144 X 300sec. Subs with IDAS NBZ filter and ASI2600MC Pro cooled color camera, Processed in Pixinsight

MAARTEN BROESS

Heart Nebula/ IC1805/Melotte 15

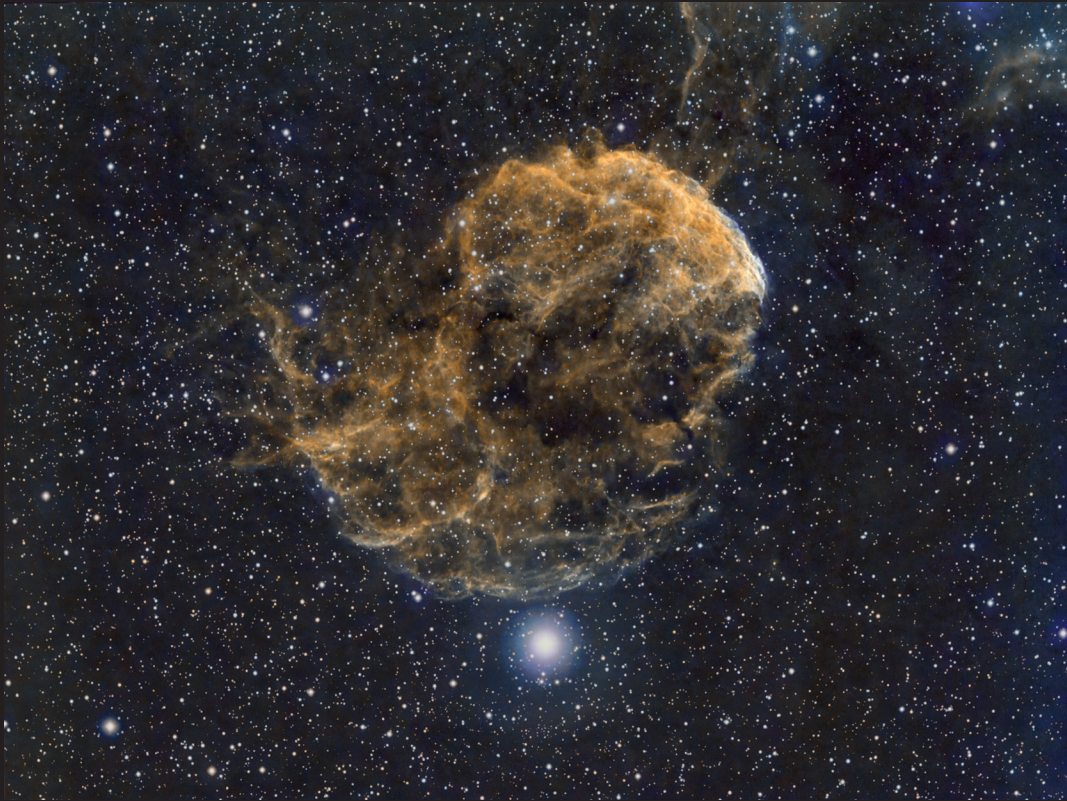
September 1, 2022 - Celestron
C-8 XLT f/6.3 AP200m FL
1280mm, IOPtron GEM45 OAG
guider, 89 X 300sec. with IDAS
NBZ filter and ASI2600MC Pro
cooled color camera, Processed
in Pixinsight



LLOYD MERRILL

Orion Nebula

March 2023 - 152mm f/5.9 Refrac-
tor, SBIG STF - 8300C color cam-
era, 30 x 5min. exposures = 2.5
hours, Integration and processing
using Pixinsight



JOE ZAJAC

IC 433

Astro-Tech AT 120ED - SBIG
ST-8300M ZWO AS120mm Mini
Guide Camera, OIII 9nm Filter (1h
30m), Ha 7nm Filter (2h 25m),
Sii 7nm Filter (1h 30m), Total
integration Time 5h 25m

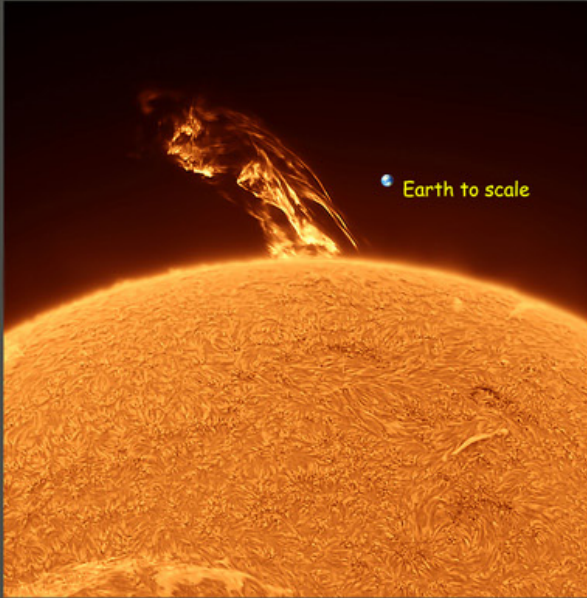


JOE ZAJAC

NGC 2237 Rosette Nebula

Astro-Tech AT 120ED - SBIG
ST-8300M ZWO AS120mm Mini
Guide Camera, OIII 9nm Filter
(1hour), Ha 7nm Filter (1hour), Sii
7nm Filter (1h 10m), Total integra-
tion Time 3h 10m

SOLAR SYSTEM

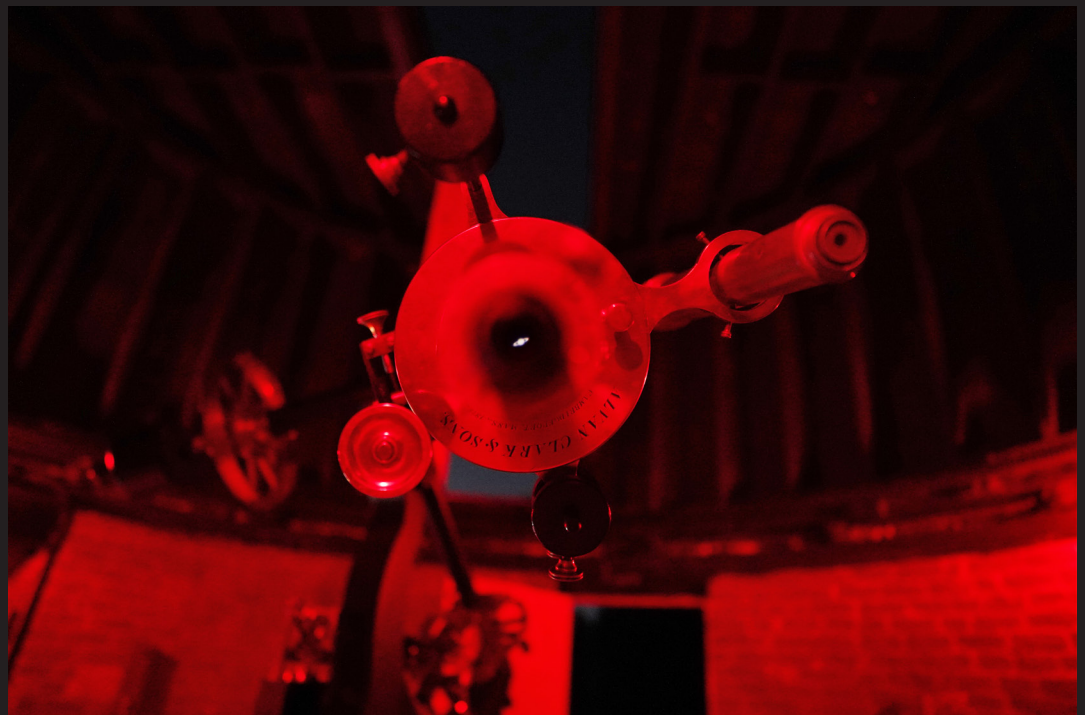


Major Solar Eruption
July 10, 2022 ~ 2:02pm EDT

1st Place • STEPHEN LAFLAMME

Major Solar Eruption

Lunt 60mm Solar Telescope
H-alpha with double stack, ZWO
ASI 178mm video cam, 2min. at
50 frames per sec. = 6000 frames
best 10%, SharpCap, Registax,
and Photoshop processing



JIM HENDRICKSON

"Observing Saturn"

Sony A711 Sigma 20mm f/1.4,
1/30sec. ISO 5000

LAURA LANDEN

Comet Neowise

July 18, 2020 - Nikon D850
70-200mm f/4 & 1.4 TC, 3 sec.
280mm f/5.6 ISO 10,000



MAARTEN BROESS

Comet c/2022 E3 (ZTF)

January 24, 2023 - SkyWatcher
EVO 72ED f/4.6, 31 X 60sec., 9
X 180sec. with UV/IR filter and
ASI2600MC Pro cooled color
camera. Processed in Pixinsight





STEPHEN LAFLAMME

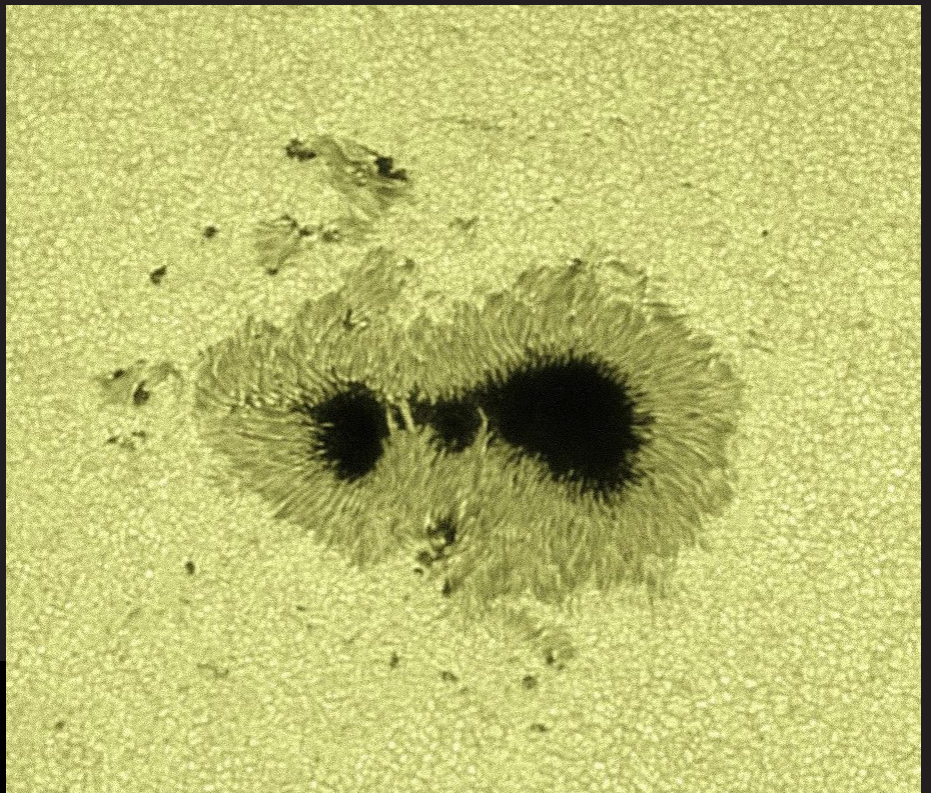
Copernicus Crater

Celestron Edge HD 11" SCT
2800mm, ZWO ASI 178mm video
cam with IR-pass filter, 4min.
@ 65 frames per sec. = 15,600
best 10%, SharpCap, Registax,
Autostakert and Photoshop
processing

STEVE HUBBARD

Sunspot

July 12, 2023 - 6" f/8 Refractor
with - Altair white light solar
wedge. Apollo Mini-M mono-
chrome camera with 6nm green
filter and 4X barlow. Sharpcap
AVI, processed with Autostakert,
Astra Image and GIMP.

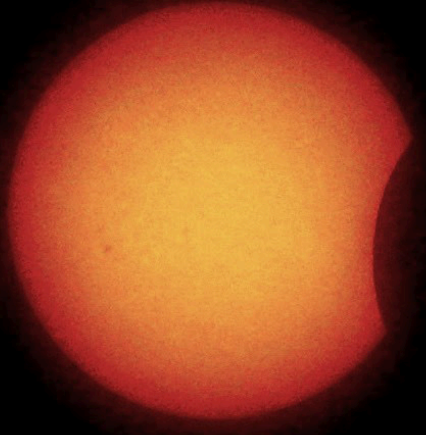


STEVE HUBBARD

Jupiter

September 19, 2021 - 6" f/8
Refractor with ZWO 224 MC
color one shot camera. Europa
is small bright dot near the right
edge of Jupiter. Barlow lens used,
processed with Autostakert and
Astra Image.

Partial Solar Eclipse: October 14, 2023

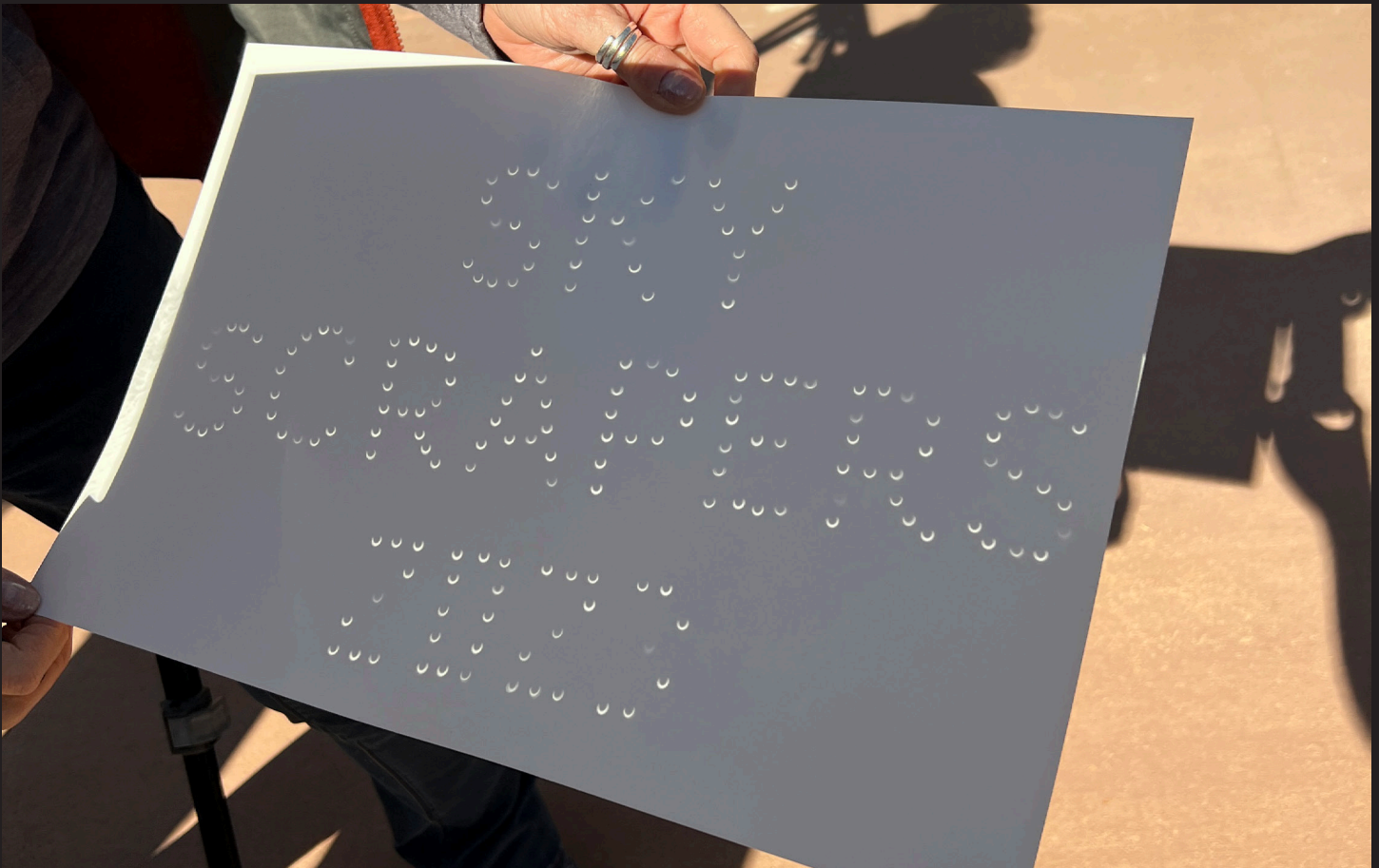


Here is a photo of the eclipse through clouds by Joe Zajac using a Canon 6D DSLR with 300mm telephoto lens at f/8 DIY solar filter made from eclipse viewing glasses. Clouds reduced the sharpness and contrast.

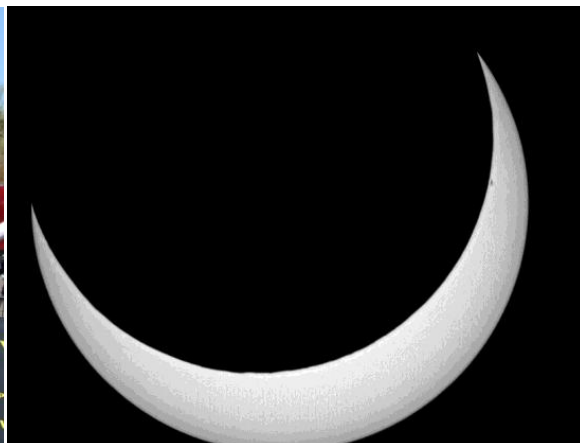


Steve Brown observed the partial eclipse from Boulder City NV.

Several Skyscrapers members, Rick Lynch, Francine Jackson, Denise Turco, Mercedes Rivero-Hudec, Jim Hendrickson, and Jack and Ileen Szelka gathered in Albuquerque, NM to observe the annular eclipse and used this pinhole projection card to display the partial phase of the eclipse. Photo by Jim Hendrickson.



On October 14, 2023, Prof. David Iadevaia and Aurora Wilde, University of Arizona Astronomy/Physics undergraduate student, hosted the NASA/ASP funded Eclipse Ambassador outreach event. The event was located at Sabino Canyon Recreation Area in Tucson Arizona. Nearly 400 people interacted with our information and volunteers in some capacity. Along with information and eclipse glasses, our event provided crafts for kids, a short informational video about eclipses, a disco ball (for viewing the crescent shaped shadow), and a solar telescope as part of the NASA funded DEB Initiative. These different booths kept people of all ages and knowledge levels interested in the eclipse. While the event lasted for about 3 hours, the majority of the interactions happened close to the maximum of the eclipse. This event successfully brought eclipse education to the Tucson community. Special thanks for the US Forest Service personnel for their help in making this event successful.



Reports

Executive Committee Meeting Monday, March 20, 2023 at 7 PM via Zoom

Present: Linda Bergemann, Steve Brown, Michael Corvese, Jim Hendrickson, Bob Horton, Steve Hubbard, Dave Huestis, Francine Jackson, Bob Janus, Rick Lynch, Kathy Siok, Steve Siok Total = 12

Minutes: Minutes for the February 20 meeting were published in the Skyscraper without corrections. A corrected copy is filed on the NSN calendar.

Open Action Items:

Astrophotography Display

Bob Horton reported that he, Rick Lynch and Jim Hendrickson met at Seagrave to discuss the astrophotography contest and a display gallery. Submit matted photographs, minimum of 8 x 10 and maximum of 11 x 14. Submissions will be mounted on a wire rack display wall under a tent; anteroom in rainy weather. Lighting harsh in meeting hall, and recommend dimmable track lighting for the east and west walls. Gallery to go between heater and window. Would also like track lighting in anteroom. Discussion on mounting the track lighting ensued. Will require an electrician to install junction boxes and switches. Repaint walls with a warmer color. Allocate \$1,000 for this project. Wire frames would add more cost.

Field Trips

Rick planning on a local field trip in May/June time frame. He will have more information next month.

Rick announced a Skyscrapers trip to Albuquerque, NM for the October 14, 2023 annular eclipse. Trip will be Oct. 12-18. Rick described the itinerary he plans. Total cost about \$2,000 per person. Travelers must make their own reservations using details provided by Rick. Rick recommended making a donation to John Briggs' museum on behalf of Skyscrapers; all agreed.

Bylaws Committee

On hold until new fiscal year.

Member Access Committee

On hold until new fiscal year.

Library Telescope

Linda reported that the telescope for Woonsocket may be delivered by the end of the month. Newport would like a second telescope; Linda will work with them to acquire one. Steve S. inquired of press coverage.

Duties Open Night Volunteers

Linda returned comments to Steve S. for incorporation. Bob Horton reported a problem with the Clark drive and plans to contact Al Hall to diagnose. Steve S. discussed an adjustment in the harp that may solve the problem.

Suggestion Cards and Boxes

On back-burner.

Planet Info Cards

Linda and Steve S. to discuss.

Portable Toilet

Bob J. reported that the toilet will arrive on March 30. Bob will be there to greet it. He negotiated the price down from \$185 to \$145/month.

Roof Replacement

Waiting for a meeting with Renaissance Roofing. Bob J. suggested taking photos by a drone to show the roofer. Rich has a drone. Barta Bros. Construction also contacted. Extensive discussion followed about continuing with a grant proposal with the information that we have. Kathy and Dave will investigate the requirements for the grant proposal.

Surplus Equipment

Trustees will be at Seagrave on Friday, March 24, to review telescopes and decide which to surplus. Linda reported that a package arrived from a B. Foote with a variety of telescope accessories. Discussion about accepting donated telescopes followed.

Radio JOVE

Masts for the antenna are up. Ed reported that telescope should be operational in May.

16-inch Meade

Repair is on hold pending warmer weather.

PTZ Camera

Installation of the new camera is on hold pending warmer weather.

Financial Audit

On hold.

Officer Reports:

President

Linda reported that we have accepted donation of another telescope – a Meade ETX125.

Monthly Meetings

Anthony Case, our April speaker, is no longer able to present. Linda has arranged for Steve LaFlamme to give two short presentations.

Iceland is still the topic planned for May. Linda will contact Laura to ensure that plans are coming together.

Treasurer

Kathy reported that our surplus for

the year will be about \$7K, resulting from sales and donations. Reimbursement forms should be submitted to Kathy before the end of the week. Linda reported that the budget is not ready to present and will be ready for our next meeting. Committees should submit budget requests soon.

Membership Secretary

Linda reported one new (reinstated) member.

Program Committee

Dave will reach out to Callahan school for a star party date. Michael will reach out to the postponed Daisy troop. Michael is working with a home-school group about visiting Seagrave. Chase Farm scheduled for April 14. Int'l Astronomy Day on April 29; we will partner with the Museum of Natural History again, as last year. Need volunteers. Looking for solar telescopes. A subcommittee on Youth Programs is making progress.

Observatory Committee

We have been opening on partly cloudy nights. Have had several visitors. Discussed approaches for getting more volunteers.

Nominating Committee

The ballot was sent out on March 24. 34 members have already voted.

AstroAssembly Committee

Nothing new to report.

Trustees

Planning for a spring cleaning day that includes members.

Unfinished Business:

Election

Ballot was emailed to 130 eligible members on March 24. Thirty-four members have already voted. Three ballots were sent by snail mail.

Budget

Budget will be submitted one month late. Anyone with budget items should submit them to Kathy as soon as possible.

New Business:

Website

Linda and Jim met to discuss our website and moving it to a new host. Costs for this change will be included in the upcoming budget.

Financial Reports

Decided to no longer post a financial report in the newsletter. Discussion about publishing an annual report.

Library Telescope Program

Cornerstones of Science, the supplier for the StarBlast telescopes and materials for modifications is no longer selling these items. Linda will investigate options for acquiring these supplies for future library

telescopes.

SPS Yard Sale

Linda made members aware that the Scituate Preservation Society is having a Yard Sale on April 22 and 23, and is looking for donations.

Good of the Organization:

Science Fair

Steve and Kathy reported that an 11th grader from Wheeler School had an impressive project on the probability of earth being struck by near-earth asteroids. Michael reinforced their endorsement. Steve moved that Skyscrapers give Victoria Spradlin a Family Membership; voted and passed.

Next Meeting: Monday, April 24

Respectfully,

Linda Bergemann, President

Skyscrapers Inc. Annual Meeting April 1, 2023 @ 7 PM

President Linda Bergemann opened the 2023 Annual Meeting of Skyscrapers, Inc. and asked visitors to introduce themselves. New member, Jonathan Gradie, introduced himself to the gathering.

Year-end Reports

Treasurer (Kathy Siok)

Three financial summaries were provided to the membership. The first was a comparison of income and expenses to our budget. Our income surpassed our projections by a significant amount due donations and sales. AstroAssembly provided us with a net income of \$2,213. Our account balances as of April 1, 2023 total to \$51,587. Copies of these summaries are attached.

Membership (Angella Johnson)

Angella was unable to participate remotely, but provided a report in advance. She reported that we added 32 new members to our rolls this year and now have a total of 142 members. Her report is attached.

Programs (Michael Corvese)

Michael reported that we have opened Seagrave to the public 23 nights during the past year, serving 587 visitors. We also held 17 events off-site that reached 928 people. We hosted a variety of member workshops and launched an astronomy club at the Woonsocket Harris Public Library. Outreach award certificates and pins from the Night Sky Network were presented to 21 members in recognition of their volunteerism.

Trustees (Bob Janus)

The trustees, Steve Hubbard, Richard Doherty and Bob Janus, have maintained the observatory buildings, equipment and grounds for the enjoyment of our mem-

bership and the general public. We have received several generous donations of telescopes and astronomy books over the past several months that will be offered for sale to members. We continue to search for a contractor to replace the leaking roof over the Alvan Clark telescope.

Old Business

Honorary Member Proposal (Dave Huestis)

At our March 4 meeting, Dave Huestis moved that donor Tommy Tse be awarded an honorary membership in recognition of his acquisition of more than \$3,000 in books and magazines. The motion was approved unanimously.

Election (Dave Huestis)

Our election was once again conducted using Election Buddy. A total of 130 ballots were mailed to eligible voters. Fifty-five votes were cast, representing 42% of the membership. Results were as follows:

President: Linda Bergemann

1st Vice President: Russell Chaplis

2nd Vice President: Robert Horton

Secretary: Maria Brown

Treasurer: Kathy Siok

Member-at-large: Steve Brown

Member-at-large: Michael Corvese

Trustee: Steve Siok

For the Good of the Organization

Rick Lynch announced a Skyscrapers trip to Albuquerque, NM to observe the October 14, 2023 Annular Solar Eclipse. The trip will be from Oct. 12-18, and will cost about \$2,000 per person. Rick went over the itinerary in detail and provided a flyer with information. He will be making a "scouting" trip and will provide more details upon return. The trip will be limited to 16 people. Travelers must sign up by May 8 and make their own reservations. More information is available on the flyer which will be emailed to all members.

Announcements

The next meeting will be on Saturday, May 6, and our subject will be a travelogue of Iceland and its auroras by several Skyscraper members who travelled together last October.

Respectfully,

Linda Bergemann, President

April 15, 2023

Skyscrapers Executive Committee Meeting via Zoom

Monday – April 24, 2023 / 7PM

Executive Committee meeting of Skyscrapers, Inc. was called to order at 7:06 pm by President Linda Bergemann.

Also present virtually were: Maria Brown, Steve Brown, Russell Chaplis, Jim Hendrickson, Dave Huestis, Steve Hubbard, Rick Lynch, Kathy Siok, Steve Siok

Total = 10

Absent: Michael Corvese, Bob Horton, Francine Jackson, Bob Janus, Angella Johnson

Minutes from February 20 and March 20 meeting were published in the Skyscraper without necessary corrections. Corrected copies are filed on the NSN calendar.

Open Action Items

Field Trips, Near and Far

Annular Eclipse on October 14, 2023. Rick reported that the deadline is May 8th to book hotels for the Annular Eclipse trip. He has some individuals who have confirmed, including Bob H, Betty, Francine, Denise Turco. Some have already purchased airline tickets. Linda sent out an email blast. Rick stated there is a limit of 12 people, 3 SUVs. Mercedes will meet up with them from a separate group.

Install antenna for Radio JOVE

Ed and Bob J working on it.

Replace PTZ Camera on Meeting Hall Exterior

Jim Crawford working on it. Anteroom camera failed as well.

Astrophotography Display

Bob H working on this. Details are being presented in proposed budget.

Roofing Contractors

Bob J working on getting quotes, within a month or so.

Appoint ByLaws/Standing Policies Committee

Linda and Steve B to work on this.

Suggestion Cards and Boxes

Linda has everything she needs but needs time to get them up at observatory.

Duties for Open Night Volunteers

Steve S and Linda working on this.

Develop Planet Info Cards for Open Nights

Linda working on this.

Appoint Ad Hoc Committee on Member Access

Linda said this is on hold for now.

16-inch Meade Issues

This was mentioned last fall and Bob J was pursuing. May need to trade out a motor / controller. This can be addressed in warmer weather. Bob H and Bob Janus and Ed Walsh will work on this.

Address Auditor's Findings

Linda said this is on hold for now.

Portable Toilet

Bob J has completed this; toilet on site.

Deliver Library Telescope to Woonsocket

Linda said telescope has been delivered.

Identify Surplus Equipment to the EC

Steve H reported that six telescopes have been identified and the Committee has to come up with some estimated prices. Linda proposed sending an email blast; pictures are available. The Board will have to decide if we are going to get rid of these telescopes. There will be a "Surplus Presentation" prepared for next month.

Officer Reports

Monthly Meetings

Russ is recruiting guest speakers; currently has three lined up to present via Zoom. Russ will work on getting speakers to present live as we have warmer weather and meetings in person. Linda is encouraging Russ to have some help in finding speakers.

MAY: Iceland trip. Linda is requesting assistance with the AV. Who is qualified and available to steer the camera, monitor Zoom, etc.? Looking for volunteers to arrange for refreshments in Kathy's absence. Maybe nice cookies, set up napkins, water, and clean up.

JUNE: No speaker yet, but possibilities include Richard Nugent (ATMoB) or making it open to members to present, along with a Summer Barbecue Social Night.

Treasurer

Kathy does not have much to report, has had some PayPal activity and checks for dues.

Membership Secretary

Angella is unavailable for the next three months, but she is planning to continue to assist with membership.

Program Committee

Saturday, April 29th is ASTRONOMY DAY at Roger Williams Park: Forecast is for rainy weather. We should have people to help with visitors. Publicity for Astronomy Day has been challenging. There is a Facebook presence and Woonsocket Library was trying to spread the word. Russ mentioned that the Library program run by John Root, currently has 187 telescopes. Russ suggested John may be able to help with some publicity through the Library Associations in Massachusetts and Rhode Island.

Steve H mentioned the concern that if it's rainy all day and night, are Skyscrapers planning to hold any indoor events? A decision should be made ahead of time if it's bad weather. No solar observing. Kathy S can help with Welcome Table if Michael is

with a telescope.

Observatory Committee

Steve S reported that plans have been sent for May and June. He has received seven favorable responses from individuals accepting assignments, and ten more people to go. Some challenges include Angella being unavailable for three months, and others who are not available for an unknown period of time. Rather than having individuals serve just once a month, they are being asked to help out two times per month. Telescope Operators are well covered. Looking more for Greeters and competent folks to point out constellations. Linda said she could try calling new members and seeking out new members who may be interested.

AstroAssembly Committee

Proposal for 2023 program to be slightly different from the past. Potential speakers are lined up. Friday evening will be a casual event, no registration required. Have members informally present. On Saturday morning, hold Registration, and the first speaker will be at 10:30 am, Jeff Norwood, Confessions of a Lunatic Vendor, Star Parties on the Road.

Break for Lunch, offering pre-ordered sandwiches, which worked well last year.

Afternoon speakers include Steve LaFlamme, Mario Motta – light pollution / health, Ed Ting.

When afternoon speakers are done, there will be a break for a Social Hour at 5 pm.

Not offering a supper, but will have light snacks available (finger sandwiches for a donation / cost?). Raffle winners will be announced, awards, and then the evening speaker. Pending speakers include: Darryl Davis of the Boston Museum of Science and Sean Walker from Sky & Telescope.

All events will be held right at Seagrave. Observing, weather permitting. Evening talks end at 7:30 pm, so people can leave when they want for their own dinners.

If you have any thoughts or ideas how to make the day proceed smoothly, how to handle Social Hour, etc, reach out to Kathy S, Linda, or Bob H.

Trustees

Steve H reported that a riding mower is working and a push mower has been donated, which Bob J will see if he can get it started. There was discussion about cleaning out the basement, maybe getting a type of storage pod or industrial trailer for the items in the basement. There is leftover wood, junk to be disposed of, and items to keep. Kathy S will follow-up on the cost of

a pod and a dumpster. Maybe \$50/week, \$150 - \$170/month. Where is the best location for the dumpster/pod? What size to get? Limit lawn damage by making sure it's dry.

Special Events

Kathy S said she would like to have a summer-time barbecue social gathering. Could bring telescopes and have a "Mini Star Party" with observing being opened to the public. Since there was no speaker lined up for June, perhaps get members to present? It would be a bright moon, could do lunar observing.

Richard Nugent is also a possibility. Club can purchase the hamburgers, hot dogs and could be potluck with attendees bringing salads and desserts. Should there be a rain date?

Unfinished Business

Budget

Kathy and Linda gave a presentation of Budget details. Incoming donations have been a nice surprise, by having more income than typical. Kathy said this not something that we can always rely on happening. As a non-profit, the budget should balance to zero.

Sales are a result of selling books and equipment. Hand-outs and materials are needed for a Youth Program that is being created, and that includes \$660 for planispheres.

There is also a fund to support a portion of the telescopes going to libraries. Linda donates time, but telescope and eyepieces need to be purchased.

Linda and Jim H reviewed Webmaster anticipated expenses. Russ offered the idea of token gifts for each speaker and \$440 is included in the budget for this. That way each speaker would get a gas card and Dunkin' Donuts gift card. In the past, speakers were taken out to dinner, but that has not been happening with meetings starting at 7pm.

Trustees did not spend that much last year, but there are some upcoming projects, such as painting, track lighting, etc. Postpone motorizing the Meade 12-inch roof.

Add a Gallery to Meeting Hall. Defer lighting to next year. Some items (ie mower and trimmer) have been donated. Proposing the purchase of a 10' x 10' tent and screens to hang up artwork since the anteroom is not large enough to properly display the photos.

Question about what may be needed for the Memorial Garden, and Kathy and Linda believe there would be funds available to

cover \$50 - \$100 of new bushes and annuals.

AC units: try with just one.

Linda and Kathy explained there will be some rearranging of some accounts to combine items and have subsections, thereby assisting with some of the auditing issues.

Steve B mentioned upcoming Annular Eclipse and Solar Eclipse and inquired if there are funds to possibly purchase Solar Glasses, either to sell or give away.

The news media could hype the events, and we could get quite a few people at the observatory, which is what happened for the 2017 partial eclipse. The Program Committee will start looking into that. Kathy will look into Rainbow Symphony and see if they are of good quality.

VOTE ON BUDGET: Motion made by Dave, seconded by Russ. Budget unanimously passed.

New Business

Logo Clothing, etc.

Steve B asked if there was any interest in selling merchandise like Skyscrapers had done in the past. There are companies such as Custom Ink where an individual could order the hat, shirt, etc. from the website and have it shipped directly to their home. Steve is wondering if there may be a small inventory kept on hand at Seagrave to sell? Embroidered items have additional costs. Jim has artwork. Kathy will look into Custom Ink options.

Night Sky Network (NSN) Demo

Linda ran through the website of NSN demonstrating the calendar, agenda, minutes, rosters, and tracking volunteer hours.

Meeting adjourned at 8:30 pm.

Next meeting is: MONDAY – MAY 22ND at 7:00 pm.

Executive Committee Meeting via Zoom Monday – May 22, 2023 / 7PM

Executive Committee meeting of Skyscrapers, Inc. was called to order at 7:04 pm by President Linda Bergemann.

Also present virtually were: Maria Brown, Steve Brown, Russell Chaplis,

Michael Corvese, Jim Hendrickson, Dave Heustis, Bob Horton, Angella Johnson, Kathy Siok, Steve Siok

Total = 10

Absent: Steve Hubbard, Bob Janus, Rick Lynch

Minutes from April 24 meeting were published in the Skyscraper with necessary corrections. Corrected copies are filed on the NSN calendar. On a motion by Dave H, seconded by Steve S.

Open Action Items

Field Trips, Near and Far

Jim reported on behalf of Rick. Eight people have signed up for the Annular Eclipse on October 14, 2023. Rick is going to start working on local field trips.

Install antenna for Radio JOVE

Steve S does not know status. Suggested that images could be viewed from various cameras.

Replace PTZ Camera on Meeting Hall Exterior

Linda says it's up and working. Some discussion on the setting for motion detector and ensuring it is off. Jim said there was some light pollution in the front yard the other night. Even if the power goes off, the setting should remain the same (no motion detector). There is a new camera, updated the firmware on the recorder, so there were some glitches. Matt White was up there and helped.

Astrophotography Display

Budget was passed, so Linda confirmed we have money to at least get started on the project. Bob H is planning to work with the Trustees this summer. Plan is to outline a schedule to determine what jobs should be done first. Bob would like to see the wire frames ordered. There are some items that will get purged first, which will then make a space for the frames.

Identify Surplus Equipment to the EC (Trustees)

Steve H has sent a list of telescopes to Linda. These details will be reviewed under "Trustees."

Roofing Contractors

Linda and Dave were originally going to pursue a grant for repairs, but Steve S reported that the contractor did some repairs at no cost. Based on the most recent rainfall, there was a minimal amount of water in the bucket and no water on the floor.

Suggestion Cards and Boxes

Linda has everything she needs but needs time to get them up at the observatory.

Duties for Open Night Volunteers

Steve S and Linda working on this.

Develop Planet Info Cards for Open Nights

Linda working on this.

16-inch Meade Issues

Need warmer weather. Bob H is going to work with Bob Napier and Mark Munkacsy.

Logo Items

Steve B has done some research, mostly with Custom Ink. He's impressed with the option of items, some of which have

minimum quantities. Since Skyscrapers would qualify for a fundraising campaign, Steve will investigate setting up artwork and pursuing options as to what kind of profit would be appropriate to help set the purchase prices. He will pursue it if he has items sent directly to him and then Skyscrapers sell at a profit, as well as having individuals order directly and they pay for the shipping right to their home.

Modify Newport Library's 2nd Telescope

Linda has picked it up to make the necessary modifications.

Officer Reports

Monthly Meetings

Russ reported on upcoming meetings and presenters.

JUNE 3rd: Greg Shanos on "The Great American Eclipse Double Header." Originally was going to be Steve Nathan about 3D astronomy; he has 40 pairs of 3D glasses to distribute.

JULY 8th Bruce Berger about Maine Astronomy retreat; Russ to get a bio from Bruce.

AUGUST: Sarah Mill Holland from MIT re: Grand Diversity of Extra Solar Worlds.

SEPTEMBER: Richard Nugent about Observing satellites.

October, November, and December are still to be determined.

Stefan Alexander at Brown and the Perimeter Institute in Canada has an interesting talk including his saxophone. Kathy mentioned he has already spoken to Skyscrapers, but could be nice to have him return.

Cookout is potentially scheduled for July 8th. People like the idea of a social event. For a cost (\$5? via Paypal?), Skyscrapers would provide hamburgers and hotdogs (and rolls), and we would ask participants to bring side dishes and desserts. We would need to have an RSVP, so the right amount of food could be purchased. Grills will need to be available and double-checked for propane, etc. Weather dependent could offer Solar Observing, with the meal ready around 5PM. Michael could help with coordinating the solar telescopes. If cloudy, would there be other arrangements? Will need people to sign up for assignments: cooking, coffee, set-up, cleaning, etc.

AstroAssembly Committee

Bob H is having a meeting Wednesday, May 24th. Ed Walsh will assist as Registrar and Bob will make sure Ed's questions are answered. Linda not able to attend that

meeting, but will plan to put something together as far the responsibilities of a Registrar. PayPal payments, etc. go to the Treasurer, but it would be helpful if Registrar was familiar with Excel. Majority of participants register on-line, but there are some who register at the door. Sue Hubbard has helped in the past. Comment was made to make sure Registrars would have the opportunity to attend some of the talks as well.

Michael will work on promoting Astro-Assembly via social media and email.

For speakers, Bob has sent emails to Stephen Laflamme, but has not heard back from him and will call him in June. He is reaching out to Rick Lynch as well. Saturday speakers are all set.

Kathy S reminded Bob that details will need to be worked out for the Raffle and the Reception. The decision was made that it would be best to include cost of Reception in the registration fee. Kathy reiterated the plan is to provide a snack, not dinner. She will price out some food items and report back.

Again, people will be needed with set-up, getting the food, coffee, clean-up, etc.

Treasurer

Kathy shared the Treasurer's report. Final Amazon Smile donation of \$45 and program has ended. Income came from interest and dues. Budget was reviewed and organized by Inflows and Outflows, with the final amount ending in the positive.

Membership Secretary

Angella continues to maintain the membership and will confirm the status of dues on some members with Kathy.

Trustees

Steve S said that they are working on a storage unit for the beginning of June, fixing rotted trim, and setting circles on the Clark.

It has been suggested that the Clark should not be used unless we have planets in the sky. Have people bring their own telescopes. Smoke coming down from Canada, and in the near term, that could have an impact on any telescope and observing.

A presentation was made of the 9 telescopes the Trustees would like to part with. Each one was reviewed, and the group unanimously approved these going into Surplus as proposed by the Trustees. Steve H and Bob H came up with prices.

1) 8" Orion Dobsonian: \$250 / \$350 - Steve H and Bob H came up with prices.

2) Bird Jones design - free or trash.

Unique design, built in Barlow ahead of secondary mirror. Not well corrected. Parts? Tripod? Be honest with them. Optics?

3) Meade ETX 125: \$275 / \$375 No hand controller

4) 6" deepspace dob - \$25 members only

5) Meade ETX 90 - \$150 / 250

6) Meade SCT with eyepieces, fungus \$300/\$400 (Bob H could help clean up)

7) Criterion 6" SCT with Golden Pyramid tripod. \$150/\$250 (1970s). Steve S might have parts from a scope he got from Coventry high school.

8) 3" Kmart reflector \$15/\$25 New in the box. Loaner? Part of Library Telescopes.

9) Orion 90mm refractor \$50/\$100. Maybe a solar filter?

Program committee

Michael will be meeting with the Rhode Island Historical Society to kick off Sally Ride Week, which will comprise of activities, information about historic women and their contribution to STEM. Michael is picturing having a table in a meeting hall; there will be videos and literature.

Public observing night on June 10th.

June 17th is a Solar Day at Roger Williams Museum of Natural History. Since two days for solar viewing has been rained out, we are going to try again. He'll put out a general request to membership for solar telescopes. Maybe have some kind of Solar Banner.

Potential of a Girl Scout event for Sunday 6/25 and Monday 6/26.

There is a sub-committee for youth programs and will present to the EC in the near future.

Observatory Committee

Steve S reported that things are OK, nothing new to report. Still does not have enough people to satisfy a month; currently have 18 volunteers, and ideal quantity would be 25. People are needing to double-up, especially for those people who have been rained out.

Membership

Angella reported we have five new members for the month, three of whom were sponsored Bob Napier. Linda and Angella will discuss members who have not yet renewed. Some talk of a Senior Member / Student Member categories, etc.

Special Events

Kathy and Linda reported on the need to get some help with Hospitality (desserts, picking up garbage, etc.). Linda sent an email looking for volunteers. Steve B and Angella volunteered for the June meeting.

Grant Committee

Dave H, Linda, and Dave met to review the application form from Champlin. With the last grant, work was done on the 16". Have not yet confirmed deadline - June 1st or July 1st. Different aspects to providing necessary information.

Linda would collect information and assemble in a package, all done electronically to submit through website. At some point, others can help to put together documentation to help support the application when they're ready to do it. Goal is to avoid crisis mode.

Steve S - good proposal from fellow in Massachusetts, but if we wait 6 months, and price goes up, what do we do? Get an updated quote. Other: Skyscrapers pay the additional 10%??? Not necessary.

ByLaws/Standing Policies Committee

Steve B, Linda, and Kathy S are working on Google Docs for a collaborative tool. Linda wants to develop a timeline to review. Steve reported there is going to be some back and forth of the documents, and when ready will present to the EC. Linda will start working on it in early June, and get some information to Steve. A Student Membership is an example of one of the items to be addressed.

Unfinished Business

None

New Business

Surplus equipment: Motion by Dave, seconded by Michael. Surplus List unanimously passed.

Good of the Organization

Steve S asked Bob H if he would be interested in giving a talk about his astrophotography to group of artists in November.

Announcements

Astronomical League Dues deadline is June 30. Kathy S will get a list to Linda of who has paid. Currently have 29 people who belong to the Astronomical League.

Linda reported that the audio equipment has been moved and the next step is to move computer, projector from left to right, which will also involve moving books. Challenging to find ways to fit 80 more books in the cabinet.

Steve S is planning to replace AC in the back, not the front. Some discussion on the noise problem from the air conditioners. Linda will meet with the Trustees to come up with the plan to replace that AC.

Jim H reminded the group of an upcoming Super Nova in M101 and asked if anyone gets photos, to be please send them to him.

Meeting adjourned at 8:26 pm.

Next meeting is: MONDAY – JUNE 19th at 7:00 pm.

Skyscrapers Executive Committee Meeting via Zoom Monday – June 19, 2023 / 7PM

Executive Committee meeting of Skyscrapers, Inc. was called to order at 7:04 pm by President Linda Bergemann.

Also present virtually were: Maria Brown, Steve Brown, Russell Chaplis, Jim Hendrickson, Dave Huestis, Steve Hubbard, Angella Johnson (part-time), Jeff Padell, Kathy Siok, Steve Siok

Total = 11

Absent: Michael Corvese, Bob Horton, Ed Walsh

Minutes from May 22 meeting are filed on the NSN calendar.

Open Action Items

Field Trips, Near and Far

Nothing new to report.

Install antenna for Radio JOVE

Ed Walsh and Bob Janus tested antenna, will hopefully be ready for July 8th. There was a question about what happens with the wires when not in use; Linda will investigate. Ed Walsh is planning to write up an announcement about the Radio JOVE for the newsletter.

Identify Surplus Equipment to the EC (Trustees)

Steve H reported that the basement has been cleaned up with additional help from Jim Crawford and Bob Janus. There are some items in the pod. Telescopes to sell or to loan have been moved to the 16” building where it is drier.

Rick Lynch mowed the lawn. Steve also mentioned they pulled out the binocular mount for astronomical binoculars. Steve has purchased an adapter to attach the binoculars to the mount. Suggestion was made to get a chair or some other means for ease of use.

Duties for Open Night Volunteers

Steve S working on a manual for volunteers. Bob J may have electronic copy of instructions on how to turn on and off the propane heater. Also needs a policy for issuing keys. Usually the person in charge for the night would be the one to open, Steve still thinks it may be good idea to for some of the volunteers to have a key.

16-inch Meade Issues

Telescopes in the corner of the 16” building. No status on repairs to the telescope drive.

Logo Items

Steve B has looked at some websites. He

will talk with Kathy S and have something prepared for the July meeting.

Plan for July Picnic

July picnic will be an old-fashioned Ham and Bean supper. Russ is bringing a baked ham, Irene is providing fresh fruit salad. There will be a crock of beans. We will ask people to bring corn bread, side salads, and desserts. We will ask for an RSVP so we know how much food is needed. The club will provide the drinks, plates, etc.

Russ will plan to be there around 4:00 pm, start to eat around 5:00 – 5:30 pm, and the speaker at 7:00 pm.

Modify Newport Library’s 2nd Telescope

Linda returned the telescope and the Library is all set. Steve S is replacing the red-dot finder on North Kingstown Library’s telescope.

Suggestion Cards and Boxes

Nothing new to report.

Officer Reports

Monthly Meetings

Russ reported on upcoming meetings and presenters.

July 8th – Bruce Berger re: Maine Astronomy Retreat

August 5TH - Sarah Millholland from MIT re: Grand Diversity of Extra Solar Worlds

September 2nd – Richard Nugent re: Observing Satellites

October- SEPT 30th – AstroAssembly

November 4th – Andrew Casey Clyde from UCONN re: black holes, gravitational waves, and new information

December 16th – Rick Lynch re: October’s Albuquerque Eclipse

Spring 2024 - Steve Nathan with a 3D presentation

Discussion followed regarding the venue for winter meetings. Jim suggested a winter meeting at the planetarium.

AstroAssembly Committee

Kathy reported that speakers are lined up and flyer is in the works. Plans for the day include speakers, then around 5:00 pm, a reception with pizza, etc. Then the main speaker. If it is clear, people are welcome to observe. Price has been raised by \$5 to accommodate paying for the reception food. Raffle still needs to be addressed. Email will go out to solicit items to be donated.

For anyone who wants a swap table will need to bring their own. The Club does have tents.

Astro Photos: Rick and the committee are currently working on the guidelines to be sent out in advance of the event. Prints

are to be matted and mounted/framed. Pictures will be hanging for the voting. There will be several categories to enter.

Due to dwindling entries, there is no Astro Bake-off this year.

Treasurer

Kathy shared highlights from Treasurer’s report. (copy attached)

Inputs: Amazon Smile has officially stopped. Kathy will provide the total contributions from the Smile program at the next meeting. A telescope was sold for \$50.

Outflows: Astronomical League dues \$250. For Outreach, telescopes were modified for Newport and Woonsocket. Postage for outreach pins and awards. Utilities – website cost.

Overall Net is in the negative for this month. Budget to date, still in the black for the year.

Discussion on what documentation is appropriate to include in NSN. Some documents are fine for members to view, but not for the general public. EC Meetings are coded as private and accessible by members only.

Membership Secretary

She has not seen any new members on NSN, and will notify Jim. Suggestion was made to identify new members in next newsletter.

Trustees

Steve H asked about the plans for the dumpster. Pros and cons to waiting until the fall. Apparently, yard waste was dragged to the back last year to a place where no one saw it.

Jeff P questioned the pile that may or may not actually be on our property.

Linda said there are still plenty of items (tables, cones, etc.) of which need to be disposed. Basement: items that we are not keeping are no longer there, but there are still (usable) items in there. Old paint, miscellaneous items to be sorted.

Linda suggested a separate Zoom meeting to discuss. Kathy S needs to know more about the container – keep it for about a month? Electronics: Staples – might give credit / or Linda will take it to a place she knows.

Program committee

Minor roof leak remains. Bob J has been checking in after the rain. Linda will check on Fridays.

At the last meeting, Michael had reported on a Girl Scout event scheduled for June 25th. Jim H offered to help and will plan to bring his 4” telescope.

Observatory Committee

Steve S said he will send out the schedule for final comment this week.

To encourage participation and get more people involved, Steve is bringing back Star Parties for July and August. No plans to open the dome of the main observatory (except when the moon is out), thereby encouraging people to look through telescopes on the grounds. As a minimum, have someone in the Clark so people can see what that telescope looks like, but the idea is to look through members' telescopes. No videos, no greeter.

Special Events

Kathy S – no other special events. December – potluck for around 4:30 pm.

Grant Committee

There is still time to apply for the roofing grant in December and we are planning on gathering documentation in advance.

ByLaws/Standing Policies Committee

Steve B and Linda will work on this.

Signage project

Dave H and Bob J have met with the Scituate Preservation Society (SPS). The Society has been putting up historical signs through the town on appropriate sites and buildings and would like to include Seagrave Observatory.

The intention is to have a sign in front of the property providing information about the observatory, Skyscrapers, and include a QR code to a link providing more information. Dave H provided some information on Frank Seagrave and Skyscrapers, but the Society is requesting more details, and referred to a copy of Our Town episode we did for the PBS series. Drafts are being sent to Linda for proofing.

Contact is Fred, and Fred is pushing for a large sign, approximately 18 x 36".

Target date of September 2023 and this should improve outreach to people in the town. Linda said a graphic artist is being hired by the SPS. Depending upon the location of the sign, Steve S asked about snowplows in the winter and to make sure set-back rules are followed.

Since it is a narrow road, Dept of Public Works will be involved in the placement of the sign. Also, for traffic purposes, speed and visibility are something to consider.

Unfinished Business

Sale of Telescopes

The Board authorized telescopes to be sold and Linda is preparing an announcement. One of the donated telescopes is missing a controller. The donor has found the controller and will mail to Linda. If it now has a working controller, that could af-

fect the asking price.

New Business

Winter Meetings

Choices for the meetings in the winter: Zoom? Or go in person, but where?

Without the in-person meetings, it has been difficult to recruit individuals to serve as officers. Weather is an issue. Community Center availability is limited. Is the Planetarium an option? Scituate Preservation Society?

Facility Rental

Linda said that she received a Facebook message that someone would like to use the facility for a wedding proposal. If it is during an open night, no fee. If someone must be there to open, then ask for a donation.

Meeting Hall Camera

Meeting Hall camera is broken; Linda getting a new camera for \$47.

Surplus equipment

People have been there to help with the cleaning. Rick Lynch has cleaned up accessories and eyepieces, packaged, labeled, and priced them for sale at the July meeting. Whatever is left, Rick will try and sell at Stellafane and Astro Assembly.

Name Tags

Discussion of pros and cons of having name tags, as well as different styles available (lanyards, disposable, etc.). No decision was made.

Good of the Organization

Linda received lithographs and NASA photos, as well as Webb Telescope posters from Night Sky Network. Items have the potential to become raffle or door prizes.

Linda received an NSN club Banner to fly, as well as solar viewers for eclipse.

Linda is expecting a shipment of 100 Astronomy Guides from the Astronomical League.

Linda received a message from an individual who is looking for an old telescope lens for a stained glass art project. Questions were asked, what kind of lens: convex? Flat? Diameter? Linda will get details. Depending upon what they are looking for, there may be a green "junk" telescope that has some glass available.

We received a text inquiring about Charles Smiley information – referred to Dave H.

Kathy started a project to identify astronomy clubs in New England and their current contact information. If anyone is aware of any astronomy clubs in New England, send an email to Kathy with information.

Some discussion about putting an AstroAssembly notice in Sky & Telescope and Astronomy.

Announcements

Astronomical League Dues have been sent in by Kathy. Jeff Padell, our AlCor has submitted the updated roster.

Meeting adjourned at 8:28 pm.

Next meeting is: MONDAY – JULY 17th at 7:00 pm.

Skyscrapers Executive Meeting July 17, 2023

Attendees: Linda Bergemann, Dave Huestis, Rick Lynch, Jim Hendrickson, Steve Hubbard, Steve Siok, Kathy Siok, Bob Janus, Mike Corvese, Russ Chaplis, Steve Brown

Welcome 7:07 pm

Additions to Agenda

Minutes from last Executive Meeting were approved as written.

There was a discussion regarding how active the Skyscrapers are compared to other local clubs in response to a comment raised by a member. The Executive Committee discussed it at length and believes that the club is very active in a number of areas, particularly in outreach. Concern was also raised regarding how Skyscrapers was perceived by the Champlin Foundation. A suggestion was made to send them our newsletter to keep them informed about our activities.]

Open Action Items

Duties for Open Night volunteers – nothing to report. Any plans to get the 16" up and running? Steve H will check into it for the next meeting.

Logo Items – Custom Ink only? There are a number of companies that can provide products, it may make sense to limit the number we're looking at to keep it manageable. Maybe have some product available at Astro Assembly for folks to look at – with pointers to a website for individuals to purchase as they want to. Kathy S. expressed an interest in helping out with this and Steve B and Kathy will coordinate over the next month to move this forward.

Field Trips – nothing to report, hopefully have some new information in August.

Radio JOVE – work session planned for Aug 12. Ed Walsh will send an email out to folks who have expressed an interest in helping. 10:00 am on the 12th.

Suggestion Cards and Boxes. Cards printed up, need to get box set up at the observatory.

Develop Planet Info Cards. Nothing to

report.

Discussion regarding the summer picnic and whether it's too hot for a ham and bean dinner. Should we do something different (other than hams)? Hamburgers and Hot Dogs using the grill at the observatory? Let's plan to go ahead and see how things work out...we'll need to make a decision in the next couple of weeks.

Officer Reports

Monthly Meetings – Sara Millholland is the next speaker coming up. Need Jan, Feb, March.

Treasurer - \$66 in the black. Have sold \$500 worth of telescopes, plus \$100 for accessories.

AstroAssembly Committee – nothing to report, things are rolling along, close to having a flyer done. PayPal is up and running.

Membership Secretary – have 4 new members, 2 families. Diane and Erik Paul (Sutton MA), and Zara DeCarlo and Clan-cy Stevens (Woonsocket RI).

Trustees – POD left. Moved trash to area behind roll off roof for the time being. Still looking for volunteers to help cart trash off (trucks). Transfer station personnel indicate that they will let someone who does not live in North Kingstown drop things off as long as a person who lives there is present. The cost would be \$0.15 per pound. The transfer station is open Tuesdays, Fridays and Saturdays. Would propose we compensate the driver for his fuel.

Program Committee – where do star parties come under? Steve H is willing to coordinate as a subcommittee of the program committee. Have several things coming up in the Fall. International Observe the Moon Night, Eclipse Event on the 14th of October moving forward with Sky Puppy Program for younger members, running a pilot in the Fall. Thanks to the subcommittee for their time (Francine Jackson, Dave Huestis, and Mark Munkacsy) – meeting twice a month, 1.5 hours a night for 5 months. 3-year vision, with recommendations and plans.

Observatory Committee -starting to get ready for Sept and Oct requests for assistance. No assignments for Sept 30 (same as AstroAssembly) – but will still need to know who is in charge.

On September 22 (Friday), we are entertaining the Scituate Preservation Society for an event – still need to work out the details. They'll be coming to Seagrave Observatory to hear about Skyscrapers and Seagrave Observatory, perhaps do some observing.

Special Events – no other events except for Astro Assembly and the summer picnic
ByLaws/Standing Policies Committee – Reviewing the list received from Linda – Kathy has offered to help out with this and is probably a good task for a sub-committee.

Historian/Librarian – A brief discussion on the Burrillville School – we did not do anything with them in the spring. Dave H did try to contact them in person but has not heard back yet. If they want to do something in the Fall, it is probably too early to discuss, as school is not yet back in session. Dave will still reach out to them. Have not heard anything recently on the signage project.

Webmaster – We are in the process of migrating the web site to another platform.

Flicker page has been set up with the last two events. Will start loading the astrophoto submissions next. Question from Dave H. - will links that have been published previously still be valid after website update? Older links can be redirected to the new location if needed, or if there are frequently used links they can be brought to a separate page.

Unfinished Business

Winter meetings (January, February, March), what are good times and places – planetarium at Roger Williams Park? Need to be out by 8:00 for Community House, which may be a challenge given all of the equipment that needs to be moved. Need to consider the ZOOM capability as well (WiFi). December 16 is reserved at the Community House. Libraries? Do they close early? CCRI? Not sure how that would work on a Saturday evening... Meet at a church? What about preservation society? Not too much parking. Weather may drive our location. What about the Grand Lodge...? It's in Providence. Will make a decision by next month...

New Business

Kathy found some pictures from the 70's that included the replacement of the cannon balls for the dome. Wondering if something could be done with them? A matted collage to go into the anteroom? Jim would like to digitize them. Could it be placed with the cannon ball in the glass case, or perhaps a single picture instead? Rick has a number of photographs from that replacement.

Good of the Organization – Linda – in the process of moving the library books in the meeting hall to make room for some of the audiovisual equipment. Also, we got

a shipment of a bunch of lithographs, in the anteroom – for those who want them. Got a banner from the NSN – would like to work with the trustees to see where we could put that up (temporarily). Need to update our tri-fold flier (not color, too expensive to produce).

Announcements – Greg Shanos giving a talk at the Association of Lunar and Planetary Observers (ALPO) conference on viewing Venus. On the calendar for Fri afternoon on July 28. Free and open to all, on YouTube and ZOOM. Keynote speaker on Saturday night is Scott Roberts, the topic is "The Future of Amateur Astronomy." For more information you need to visit the ALPO site.

The Museum of Natural History is changing their temporary exhibit to one on the James Webb Telescope.

Next Meeting, Monday Aug 21 (tentative)

Adjournment

Skyscrapers Executive Committee Meeting via Zoom

Monday – August 21, 2023 / 7PM

Executive Committee meeting of Skyscrapers, Inc. was called to order at 7:02 pm by President Linda Bergemann.

Also present virtually were: Maria Brown, Steve Brown, Michael Corvese, Jim Hendrickson, Dave Heustis, Bob Horton, Steve Hubbard, Kathy Siok, Steve Siok

Total = 10

Absent: Angella Johnson, Bob Janus, Rick Lynch

Minute from July 17 meeting were published in the Skyscraper without any corrections. Copies are filed on the NSN calendar.

Open Action Items

Field Trips, Near and Far

No report.

Install antenna for Radio JOVE

Kathy reported that the antenna is up and there are some software difficulties.

Replace PTZ Camera on Meeting Hall Exterior

Linda says it's up and working. Some discussion on the setting for motion detector and ensuring it is off. Jim said there was some light pollution in the front yard the other night. Even if the power goes off, the setting should remain the same (no motion detector). There is a new camera, updated the firmware.

Duties for Open Night Volunteers

Still in progress. Kathy spoke with Rich about a sound system. Linda would like to

get a list of what needs to be done.

16-inch Meade Issues

Steve H, Bob Horton and Bob Napier are working on this. Bob N said he would reach out to Mark. Bob Horton said that over the next couple of weeks, the plan is to replace the worm gear in the declination drive. The motor is still good. Brown University donated an old fork mount for parts.

Some discussion about the telescopes for sale; they are not in the way of the 16-inch. There are two 8" Meads donated, one of which may not work. Linda will try again to see if she can sell any of the telescopes; if there are no buyers, she will take another route.

Logo Items

Steve Brown and Kathy continue to work on these, pursuing a few different companies, including Custom Ink and Lands End. Jim H provided the artwork. Items to start with include baseball caps, T shirts, sweat-shirts, and polo shirts. General consensus is to mention Seagrave Observatory. Some other considerations to pursue include embroidered logo, as well as having options for what type of T shirt is available.

Steve mentioned the ATMs of Boston have pages and pages of merchandise for their logo. One can go onto the site and order whatever you want. Kathy and Steve will continue to work on this, acknowledging time is of the essence if anything is going to be unveiled for Astro Assembly.

Suggestion Cards and Boxes

Accomplished. Linda got the box and suggestion cards up in the back of the Meeting Hall, as well as one in the anteroom. Once the card is completed, instructions are to submit into any Donation Box.

Develop Planet Info Cards for Open Nights

Nothing to report. Linda is looking for clarification as to what she is supposed to be doing and for whom.

Officer Reports

Monthly Meetings

Russ was not present; Linda reported.

SEPTEMBER: Richard Nugent about Observing satellites.

OCTOBER: AstroAssembly

NOVEMBER: Steve H got J. Andrew Casey-Clyde, UCONN

DECEMBER: Steve Nathan

JANUARY: To be Determined

FEBRUARY: Remote speaker

AstroAssembly Committee

Bob H reported. There is a meeting Aug 22nd to discuss various duties. Will need to get commitments from volunteers. The

Program is all set. We have the display panels for Astro Photography and Rick will handle the contest.

Treasurer

Kathy shared the report showing we are over-budget by almost \$2,000, but it's not concerning. There were two air conditioners, but one was the wrong model, and therefore, we will get back \$500. She is also finding it easier to make purchases using the Skyscrapers bank card rather than processing reimbursement to members. Money is coming in for AstroAssembly. Expenses for the Capital Equipment (air conditioner, pod, and new remote) were already in the budget.

Membership Secretary

Linda reported there were no new memberships for this month.

Trustees

Steve H reported. Jim Brenek removed a lot of the leftover wood, etc. Linda requested that the perimeter of the property be trimmed before Astro Assembly. Steve H requested the date for the property clean-up, and he will get a call out to people. Jim Crawford will lead and coordinate if we give him the date and get people to show up and help.

Linda requested that someone be put in charge of the Memorial Garden; she would like it tended to prior to Astro Assembly. Bob H said he will take care of it for Astro Assembly; he already knows what flowers he wants to plant. Bob agrees there should be a team of people to help maintain it, starting Spring 2024.

Discussion about making sure trash is removed from the property. Linda found two mouse traps and wants to make sure those are not out on meeting nights. Linda requested a good plan for trash removal after meetings and events. She would like a list for each meeting/event: Who is opening, who is closing, who is in charge of refreshments, and who is taking the trash home?

Program Committee

Michael reported that when he recently opened up the 12" telescope, and he was inundated with hornets. A nest was located in the Meade side, left hand corner by the desk. Suggestion was made to check the 16" for nests. Dan discovered the nest; he took out the 8" and unfortunately the finder was not working. Batteries were not dead; never end up getting it up and running. Kathy said the battery was just loose, and it was fixed. Kathy said we do have Pest Control and we should call them to address the

hornet nests. There were also bees in the gazebo.

For events, on 8/23, they will be at Chase Farm in Lincoln, RI. Chase Farm is a non-profit organization, and plan to charge for the event.

On 8/25, Riverbend Farm, Uxbridge, MA

Night Sky Network having a seminar, and Michael was going look at that.

In September, there is an Astrophotography workshop. Some individuals have requested this workshop, and he will let them know it is being held.

On 9/22, there is an event planned at Seagrave for the Scituate Preservation Society. Bob J will run the Clark, and members will bring their own telescopes, and set up in the courtyard.

In October, Laura Landen will open the observatory for potential eclipse visitors (only 19% in RI).

On 10/21, public observing night for Observe the Moon Night. Steve S suggested having some sort of slide show. Michael will see what kind of resources are available.

Michael asked Bob H about running another Optics Cleaning Workshop this fall. Bob would be glad to run it again. Rather than a lecture format, Bob would prefer that members who want to get their optics cleaned, register ahead of time, and bring their own telescopes and actually clean them that day (mirror, eyepieces, etc).

Steve S asked how the lens on the Clark was looking; should that be cleaned? Steve H thought it was dirty/dusty. Bob H will look at it. As far as supplies needed (knowing there is no running water), he would bring bottles of distilled water, ethanol (90% alcohol or methanol), drop of detergent, lint-free cloth.

Michael talked about the Sky Puppy Program, designed for youths aged 6-10. Knowing the program is free, one library is interested in doing a pilot program, limiting it to 20 participants. The plan is to hold an information night in February, then kick off the program in October, meeting two times per month. It would be part classroom, part observing. If successful, could spread out to other communities.

Michael will check with Portsmouth Library to see how often the telescope is checked out, but he has heard it is a popular item.

Steve H asked about a members' Star Party, but weather has been a factor, and this requires further discussion. Linda would like to get a team together to discuss

Member Activities. The EC does not have to be the ones to keep making decisions. Linda will give some thought to that.

Observatory Committee

Steve S reported there were approximately 15 visitors on August 19th. Schedule is prepared for September and October. For the Star Party Nights, Steve S will be at the Clark; Linda will be the Greeter. When a full moon, no need to have anyone point out constellations. Linda would like to review the “rules,” and determine what kind of rules may be needed.

Special Events

Kathy reported. Linda will connect with her regarding the Preservation Society. The Society is aware that there is no running water, and a limit of 45 people.

Kathy is working on Hospitality for Astro Assembly.

Kathy Babcock and Sue Hubbard have helped out with refreshments; has not yet heard back from Fran. Suggestion was made that Fran may be able to help out with Public Relations notices rather than refreshments. Kathy said that socializing after the meetings has been working out well. And it has also been helpful that people bring food items, but we supply the beverages.

By Laws / Standing Policies

Steve B reported that he and Kathy have been trying to get candidates for a Sub-committee. They have not recruited anyone but are trying to find someone who has a history of the Club, and some experi-

ence with By Laws and policies. The Plan is to get both documents in an editable format. No timeline has been set to complete this review.

Historian / Librarian (Dave)

Dave H is the speaker for the Preservation Society.

Dave continues to organize items. The most recently acquired books are located on the right-hand side of the bookshelf. They will stay there for about a year. He wants to remind members that the books are there to borrow, but not many people have taken advantage of this benefit. Some discussion as to the exact process for borrowing a book; does it need to be clarified and relayed to members? After the one-year timeframe, Dave, offers the book up for sale, with priority being given to members, and then other local societies. AstroMart and Cloudy Nights have not been appropriate sites for trying to sell these books. Dave is open to suggestions as to how best to sell them.

Webmaster

Jim H said AstroAssembly is up on the website. He is completing a couple more speaker bios for the program and will start promoting the event soon. No new progress on moving the website.

Kathy S asked about options on the AstroAssembly program, maybe simplify it and decrease expenses. Possibly a two-page guide, and details available on the website via QR Code. Make it black and white rather than color. Steve H said he did like

the nice, glossy programs from the past as a souvenir.

Unfinished Business

Winter meetings (Jan, Feb, and Mar)

Continue to go with Community House in North Scituate? Will they be in person and on Zoom? If bad weather, just Zoom? In February, the speaker is by Zoom. Steve H believes the Community House reservation calendar will become available in November.

Linda is requesting a written plan and individuals assigned to move the Audio Visual equipment, set it up, and return it. There should be a written list of the equipment and directions as to how it works and how it gets set up. In the past it had been Jim Crawford and Bob Janus, but they are not Trustees.

Member Activities

Linda is looking for more input on Member activities. She feels we need to put more focus on the members and some different voices involved.

Eclipse Map

Jim H would like to get the Eclipse Map (approx. 18” x 24” on foam board) up for AstroAssembly; not sure where. Steve H will locate it.

Is there a committee to paint the Meeting Hall?

Meeting adjourned at: 8:08 pm

Next meeting: MONDAY – SEPTEMBER 18TH at 7:00 pm

AstroAssembly 2023 Photo Gallery

<https://flic.kr/s/aHBqjAZDZy>



STARRY SCOOP

Editor: Kaitlynn Goulette



WHAT'S UP

The fall constellations, spread across the southern sky, hold center stage this month. Fomalhaut, nicknamed the "Lonely Star," remains the only 1st magnitude star in this region. Located directly above it is Aquarius the watercarrier, which contains the planet Saturn. Its Water Jar asterism is easily recognizable with four stars forming a Y-shaped pattern. Aquarius is just one of the many ocean-themed constellations in this area of the sky. Delphinus the dolphin, Capricornus the sea goat, Pisces the fishes, and Cetus the sea monster are located close by.

After the sun disappears below the horizon, Saturn is easily visible high in the southeastern sky. On the 3rd, Jupiter reaches opposition, which means that it rises at about sunset and is located directly opposite the sun. Both of these gas giants are fabulous telescopic objects. The hours preceding sunrise hold Venus, commonly known as our "Morning Star." It appears as a star-like beacon and is found high in the eastern sky.

November brings us the peak of two meteor showers. The earliest, occurring on the night of the 4th into the morning of the 5th, is the Taurid meteor shower. Annually, it runs from September 7th to December 10th and is produced by two individual particle streams, which makes it quite unique. The Leonids peaks later in the month on the 17th and 18th. It runs annually from November 6th to the 30th and produces about 15 meteors per hour at its peak. Every 33 years, this shower has a chance of producing thousands of meteors, with the last occurring in 2001. Best viewing for both of these showers is after midnight at a place away from light pollution.

Fifty years ago on November 16th, Skylab 4 was launched, marking the last Skylab

mission. Skylab was the first American space station and laid the groundwork for the International Space Station. Skylab 4 was a record-breaking mission with the crew spending 84 days in space, completing many observations and experiments. After its orbit decayed, Skylab plummeted into Earth's atmosphere in 1979 and scattered debris over the Indian Ocean and parts of Australia.

NOVEMBER'S SKY

3: Jupiter at Opposition

4-5: Taurid Meteor Shower Peak

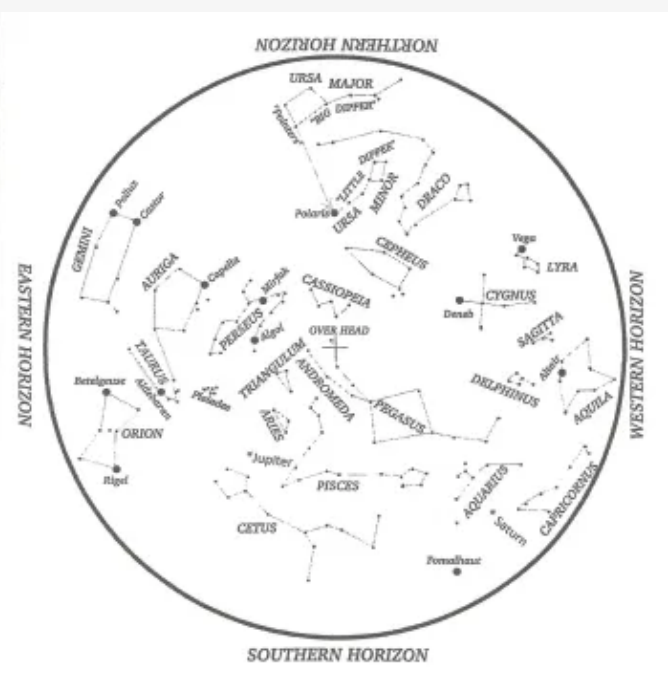
5: Daylight Savings Time Ends

13: New Moon

13: Uranus at Opposition

17-18: Leonid Meteor Shower Peak

27: Full Moon



Credit: Roger B. Culver

Hold star map above your head and align with compass points.

OBSERVATIONS

I recently had the opportunity to participate in a Columbia Greenway Glow Walk event on my local Rail Trail. To begin the night, attendees were led on a one-mile walk and were treated to stories and poems on local history and the moon. Their destination was a dry bridge that treated them to a scenic view of the rising full moon.

Along with local astronomer Ed Faits, my father and I set up our telescopes and offered views of the rising moon. As the sky became darker, we switched our focus to Saturn. At 250x, it did not disappoint and was a favorite to many. Later in the night, Jupiter rose high enough to become the next target. People of all ages peered through the eyepiece and even though Jupiter was positioned low in the sky, they were still amazed at the detail it revealed at 135x.

My town's middle school had an Open House not long ago, and I was invited by their Space and Astronomy Club to help generate interest. The club had an 8-inch Dobsonian telescope set up outside pointed at Saturn throughout the night, and I was happy to assist in operating it and explaining the views to attendees. Many students stated that it was their first time ever looking at Saturn and encouraged their parents to glimpse the planet as well. Multiple adults asked me if I had a picture of Saturn inside the telescope, convinced that the views were fake.



The purpose of the Starry Scoop is to communicate current astronomy and space events. If you want to share your observations or get digital copies of the Starry Scoop, contact starryscoop@gmail.com. The Starry Scoop is now on Facebook. Clear skies!

OBJECT OF THE MONTH

The Bubble Nebula, officially designated NGC 7635, is the featured object this month. This beautiful planetary nebula is accompanied by a nearby open star cluster, M52, and is located about 11,000 light-years away. Its pleasant bubble-shaped portion was formed by the stellar wind of a central star. The nebula is classified as an emission nebula, which means that it has become ionized and shines with its own light.

Find NGC 7635 in the constellation Cassiopeia, about seven degrees west-northwest of the star, Caph. A medium-sized telescope is needed to resolve the nebula, but the nearby star cluster can be spotted in a backyard telescope. Good luck!



The Bubble Nebula
Photo Credit: NASA, ESA, and the Hubble Heritage Team (STScI/AURA)



Columbia Greenway Glow Walk

Directions to Seagrave Memorial Observatory

From the Providence area:

Take Rt. 6 West to Interstate 295 in Johnston and proceed west on Rt. 6 to Scituate. In Scituate bear right off Rt. 6 onto Rt. 101. Turn right onto Rt. 116 North. Peeptoad Road is the first left off Rt. 116.

From Coventry/West Warwick area:

Take Rt. 116 North. Peeptoad Road is the first left after crossing Rt. 101.

From Southern Rhode Island:

Take Interstate 95 North. Exit onto Interstate 295 North in Warwick (left exit.) Exit to Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.

From Northern Rhode Island:

Take Rt. 116 South. Follow Rt. 116 thru Greenville. Turn left at Knight's Farm intersection (Rt. 116 turns left) and follow Rt. 116. Watch for Peeptoad Road on the right.

From Connecticut:

- Take Rt. 44 East to Greenville and turn right on Rt. 116 South. Turn left at Knight's Farm intersection (Rt. 116 turn left) and follow Rt. 116. Watch for Peeptoad Road on the right.
- or • Take Rt. 6 East toward Rhode Island; bear left on Rt. 101 East and continue to intersection with Rt. 116. Turn left; Peeptoad Road is the first left off Rt. 116.

From Massachusetts:

Take Interstate 295 South (off Interstate 95 in Attleboro). Exit onto Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.



47 Peeptoad Road
North Scituate, Rhode Island 02857